INDEX OF AUTHORS' NAMES.

TRANSACTIONS AND ABSTRACTS.

1922.

(Marked T., and A., i and A., ii respectively.)

Anonymous.

grape oil from the Canadian vine (Vitis hederacea), A., i, 97.

Δ.

Aarnio, B., absorption (by soil) of ammonium ions from solutions of ammonium salts and the effect of electrolytes thereon, A., i, 1227.

Abderhalden, Emil, are there protective enzymes against polysaccharides?

A., i, 82.

alcoholic fermentation by means of yeast-cells under various conditions. I. Influence of animal charcoal and other adsorbents on the course of the fermentation; fermation of acetaldehyde, A., i, 92.

alcoholic fermentation by means of yeast-cells under various conditions. II., A., i, 92.

the isolation of amino-acids in blood, A., i, 287.

the rôle of vitamins in the chemistry of the cell, A., i, 607.

the composition of silk fibroin and its structure, A., i, 784.

Abderhalden, Emil, and Andor Fodor, functions of the yeast-cell; zymase and carboxylase action, A., i, 92.

Abderhalden, Emil, and Ernst Wertheimer, influence of substances obtained from yeast-cells and organs on the time course of the fission of substrates by polypeptidases, carbohydrases, and esterases, A., i, 796.

Abderhalden, Emil, and Bernhard Zorn, the composition of the scales in psori-

asis, A., i, 794.
Abel, Emil, the influencing of catalysts and specifically active catalysts, A., ii, 276.

Abelin, J., physiological action of proteinogenic amines. V., A., i, 610.

Aboulenc, Jean. See Jean Baptiste Senderens.

Abrahamson, Emanuel M. See Marston Taylor Bogert.

Abribat, Marcel, modifications of Kohlrausch's method for the measurement of the conductivity of electrolytes, A., ii, 344.

Acel, Desider, a micro-method for estimation of nitrogen, A., ii, 225.

Achard, Ch., A. Ribot, and Léon Binet, adrenaline hyperglycæmia, A., i, 963.

Acree, Solomon Farley, R. R. Mellon, Pauline M. Avery, and Edgar A. Slagle, a stable single buffer solution, $p_{\rm H}$ I to $p_{\rm H}$ 12, A., ii, 157.

Acree, Solomon Farley. See also R. R. Mellon.

Acton, Hugh William, the cinchona alkaloids, A., i, 610. [pharmacological action of] cinchona

alkaloids, A., i, 899.

Adair, Gilbert Smithson. See Walter Stiles.

Adam, Matthew Atkinson, and David Alliston Legg, production of butaldehyde and butyric acid therefrom, A., i. 222.

Adam. Neil Kensington, geometrical isomerism in unimolecular films, A., i, 424.

the properties and molecular structure of thin films. III. Expanded films, A., ii, 687.

Adam, William Gordon. See William Lewcock.

Adams, Chester E., and Roger J. Williams, laboratory preparation of acetaldehyde, A., i, 222.

Adams, E. T. See Frederick S. Hammett.

Adams, Elliot Quincy, rôle of hydrogen and hydroxyl-ion diffusion in nerve and muscle action, A., i, 1211.

Adams, J. R. See Arthur W. Bull. Adams, Roger, the action of the Grignard

reagent on thiocyanates, A., i, 531. Adams, Roger, M. F. Fogler, and C. W. Kreger, the structure of disalicylaldehyde, A., i, 660.

Adams, Roger, F. L. Roman, and W. N. Sperry, the structure of the compounds produced from olefines and mercury salts; mercurated dihydrobenzofurans, A., i, 946.

Adams, Roger. See also John R. Johnson, Oliver Kamm, Wilson D. Langley, Charles Shattuck Palmer, Armand J.

Quick, and V. Voorhees.

Adickes, Franz. See Heinrich Wieland. Adinolfi, Emilio, absorption spectra of triphenylmethane colouring matters, A., ii, 601.

Adkins, Homer, selective activation of alumina for decarboxylation or for dehydration, A., ii, 834.

Adkins, Homer, and A. C. Krause, the action of alumina, titania, and thoria on ethyl and isopropyl acetates, A., i, 422. Adler, Erich. See Gustav Embden, and

Solo Isaac. Adler, Howard. See James Kendall. Adler, Leo, the function of the pancreas,

A., i, 195.

Adler, Oskar, a reaction of wood and some observations on anethole, A., ii, 401.

Adler, Oskar, and W. Wiechowski, the physiological action of melanin acids, A., i, 498.

the formation of melanin from organic substances, A., i, 1170.

Adolf, Mona, Wolfgang Pauli [with Franz Jandraschitsch, physico-chemical analysis of aluminium oxy-salts and aluminium oxide sols, A., ii, 149.

Adolph, Edward F., and Lawrence Joseph Henderson, heat of reaction of oxygen with hæmoglobin, A., ii, 350.

Agashe, Ganesh Sakharam, obituary notice of, T., 745.

Ahlberg, R., steric transformations with α-sulphonedialiphatic acids, A., i, 625.

Ahlgren, Gunnar, spontaneous reducing effect of muscle on methylene-blue; physiology of dehydrogenases, A., i, 792.

Aiello, Giuseppe, the distribution coefficients of diuretics and narcotics and the theory of narcosis, A., i, 301. Ainslie, D. S. See John Cunningham

McLennan.

Airila, Yrjö. See Leonor Michaelis, and Peter Rona.

Akamatsu, S., action of anions, particularly the hydroxyl-ion, on the colloidal condition of night-blue, A., ii, 830.

Akerlöf, Gösta, neutral salt action, at higher salt concentrations; the velocity of hydrolysis of ethyl acetate, and the hydrogen-ion activity of the catalyst, A., ii, 134.

Aktien-Gesellschaft für Anilin-Fabrikation, preparation of di- and poly-halogen substitution products of monohydric

phenols, A., i, 1145.

Albert, T. J. See Heinrich Wieland. Albert, Talbot J., jun., tetra-substituted

carbamides, A., i, 370.

Albesco, G. See (Mme) Pauline Ramart-Lucas.

Aldrich, Martha. See Willey Denis. Aldrich, Thomas Bailey, and Julia E. Blanner, derivatives of trihalogen tert-butyl alcohols. IV. The benzoyl ester of tribromo-tert.-butyl alcohol or brometone benzoyl ester, A., i, 910.

Aldridge, (Miss) Joan, and Malcolm Percival Applebey, the peroxidic compounds of copper, T., 238.

Alessandri, Luigi, singular formation of ketodinitrones and their behaviour, A., i, 558.

See Fritz Mayer. Alken, Erika.

Allander, B. See Karl Gustav Dernby.
Allen, D. M. See W. R. Bloor.

Allen, Eugene Thomas, chemical aspects of volcanism with a collection of the analyses of volcanic gases, A., ii, 219.

Allen, F. M., and Mary B. Wishart, carbohydrate metabolism and diabetes. Dextrose-nitrogen ratios in partially departreatised dogs, A., i, 893.

Allen, H. Newman, periodic structure of atoms and elements, A., ii, 758.

Alles, Richard. See Heinrich Wieland. Allison, Vernon C., W. L. Parker, and G. W. Jones, estimation of oxides of nitrogen [in air]. A., ii, 313.

Aloy, Jules, and E. Rodier, action of light on uranium salts, A., ii, 337.

Alsgaard, Peder Chr., electrolytic production of sodium perborate, A., ii,

Alterthum, Hans, theory of recrystallisation, A., ii, 623.

Altwegg, J., and D. Ebin. 2:4-diketo-5-phenyl-5-ethyltetrahydro-oxazole, A., i, 53.

Altwegg, J., and J. Landrivon, esters of ethylene halohydrins. A., i, 315. ethyl esters of p-B-hydroxyethylaminobenzoic acid and of p bis- β -hydroxyethylaminobenzoic acid, A., i, 1022.

Amadori, Mario, equilibrium between sulphur and iodine in solution, A., ii, 561.

Amantea, Giuseppe, and C. Krzszkowsky, crystallisation of hæmoglobin, A., i, 387.

Amberger, Conrad, and Karl Bromig, synthesis of fats (glycerides), A., i, 804.

Aminoff, G., the radius of hydrogen atoms in crystals, A., ii, 496.

Anagnostu, J. L. See Ludwig Pincussen.

Andersen, E. See Siegfried J. Thann-hauser.

Andersen, Erik Buch, the synthesis of ammonia by collision with slow-moving electrons, A., ii, 562.

Anderson, J. A. See Edwin Brown Fred, and W. H. Peterson.

Anderson, Paul, some properties of hydrogen desorbed from platinum and palladium, T., 1153.

Anderson, R. J., and W. L. Kulp, analysis and composition of maize pollen. A., i. 508.

pollen, A., i, 508.

Anderson, V. G. See David Avery.

Anderson, William Theodore, jun. See

LeRoy Wiley McCay, and Hugh Stott
Taylor.

Ando, Kinji. See Yukichi Osaka. Andouard, P. See A. Gouin.

André, Émile, the actual state of the chemistry of the fats, A., i, 713. the oils of grape seeds; the solid

fatty acids; method of separation of stearic and palmitic acids, A., i, 908.

André, Gustave, the changes which oranges undergo on keeping, A., i, 209.

Andrews, F. M., anthocyanin of Beta vulgaris, A., i, 96.

Andrews, F. W. See Samuel G. Liver-sedge.

Andrews, James C. See James Kendall.

Andrews, T. M. See Alvin Sawyer
Wheeler.

Angelescu, E., various oils of Origanum vulgare from different parts of Italy, A., i, 460.

Angelescu, E. See also P. Leone. Angeletti, A. See Michele Giua.

Angeli, Angelo, diazo-compounds, A., i, 774.

cellulose nitrate, A., i, 922.

Angeli, Angelo, Dino Bigiavi, and Gino Carrara, azoxyphenols, A., i, 878.

Angerer, E. von, notes of spectrography, A., ii, 3.

Annett, Harold Edward, and M. N. Bose, estimation of meconic acid in opium, A., ii, 791. Anschütz, Richard, and Walter Classen, disalicylic or anhydrosalicylic acid and its transformation into xanthone-4carboxylic acid, A., i, 456.

Anschütz, Richard, and Siegfried Jaeger, diglycollic acid or anhydro-

glycollic acid, A., i, 428.

Anselmi, S. See Arrigo Mazzucchelli.
Aoyama, Shinjirô. See Yoshiharu
Murayama.

Apostolo, C., nitration of 5-iodo-2-nitrophenetole, A., i, 335.

Appelmans, R., effect of sugar on the production of indole, A., i, 794.

Applebey, Malcolm Percival, and Robert Douglas Reid, the isomerism of metallic oxides. I. Lead monoxide, T., 2129.

Applebey, Malcolm Percival, and Sydney Herbert Wilkes, the system ferric oxide-sulphuric acid-water, T., 337.

Applebey, Malcolm Percival. See also (Miss) Joan Aldridge.

Appleyard, James Robert, obituary notice of, T., 2898.

Aptekmann, P. See J. V. Dubsky.

Arai, Kotojiro, choline as hormone of peristalsis, A., i, 970.

Arai, Minoru, the stimulatory action of amino-acid hydrochlorides on the pancreatic secretion, A., i, 297.

the bacterial degradation of *l*-leucine, A., i, 303.

Araki, Chûrô. See Heizaburô Kondô.
Arbenz, E., the phytin content of foods, A., i, 1102.

Archibald, Ebenezer Henry, and William A. Gale, the hydrolysis of platinum salts. II. Potassium platinibromide, T., 2849.

Ariano, R., considerations on cooling and heating curves, A., ii, 470.

Arinstein, Bernhard. See Carl Neuberg. Ariola, V., toxicity of the metalloalbumins, A., i, 500.

toxicity of metallic powders, A., i, 500.

Armenante, R. See Arrigo Mazzucchelli.

Armit, James Wilson, and Robert Robinson, polynuclear heterocyclic aromatic types. I. Some indenoquinoline derivatives. T., 827.

quinoline derivatives, T., 827.

Armstrong, Edward Frankland, and
Thomas Percy Hilditch, catalytic
action at solid surfaces. VII. Influence of pressure on the rate of
hydrogenation of liquids in the
presence of nickel, A., ii, 41.
catalytic action at solid surfaces.

viii. Action at solid surfaces.
VIII. Action of sodium carbonate
in promoting the hydrogenation of

phenol, A., ii, 756.

Armstrong, Edward Frankland, and Thomas Percy Hilditch, catalytic action at solid surfaces. IX. Action of copper in promoting the activity of nickel catalyst, A., ii, 757.

Armstrong, Henry Edward, enzyme action. XXIII. Homo- and hetero-

lytic enzymes, A., i, 1078.

Armstrong, Henry Edward, and Edward Victor Evans, carbon monoxide in tobacco smoke, A., i, 1226.

Arndt, Charles H., the growth of maize as affected by iron and aluminium

salts, A., i, 1103.

Arndt, Fritz [with E. Milde, F. Tschenscher, (Frl.) F. Bielich, and G.

Eckert], certain triazoles, A., i, 277. Arndt, Fritz, E. Milde, and F. Tschenscher [with (Frl.) F. Bielich], ring closure with hydrazinedicarbonamides containing sulphur. II. Thiourazole, A., i, 375.

Arndt, Kurt, and Ernest Hantge, the electrolytic preparation of sodium perborate, A., ii, 569.

Arnold, R., application of the biochemical method for characterising dextrose to the fruits of Viburnum opulus and to extracts of red Cinchona and of

cola, A., i, 311.

Arnold, W., the estimation of fatty acids based on their volatility in

steam, A., ii, 324.

Aron, Hans. See Richard Gralka.

Aron, Max, the glycogen of the embryonic liver; the factor determining its formation, A., i, 702.

Aronowsky, Alexander. See Hans.

Pringsheim.

Arrhenius, Olof, clay as an ampholyte, A., i, 707.

adsorption of nutrients and plant growth in relation to hydrogen-ion concentration, A., i, 1097.

quantitative analysis by centrifuge,

A., ii, 309.

Arrhenius, Svante, [theory of strong electrolytes], A., ii, 345.

Asahina, Yasuhiko, and Michizo Asano,

spilanthol, the pungent principle of para cress. II., A., i, 505.

Asahina, Yasuhiko, and Atsushi Fujita,

constitution of rutaecarpine, A., i, 47. anemonins, A., i, 946. Yasuhiko, and Yoshitoyo Asahina,

Ishida, oxidation of dihydroxystearic

acid, A., i, 520.

Asahina, Yasuhiko, and Yoshio Kondo, 3-hydroxy-o-toluic acid, A., i, 657.

Asahina, Yasuhiko, and Satoru Kuwada, constitution of elsholtzic acid, A., i, 1047.

Asahina, Yasuhiko, and Saburo Mituhori, oxidation of menthone by ferric chloride, A., i, 667.

Asahina, Yasukiko, and Toraji Shimidzu, constituents of the seeds of Pharbitis nil chois. II., A., i, 506.

Asahina, Yasuhiko, and Takeo Tsu-kamoto, hydration of caryophyllene, A., i, 845.

Asakawa, Osamu. See Kozo Sakaguchi. Asano, Michizo, amides and anilides of some saturated fatty acids, A., i, 437.

Asano, Michizo. See also Yasuhiko Asahina.

Aschan, Ossian, colophenic acid, A., i,

humoceric acid, A., i, 714.

Aschan, Ossian [with Nils Fontell, and P. E. Simola], the resin acids of the Conifers. V. The nitroso-chloride, nitrosite, and nitrosate of pinabietic acid and abietic acid [Levy]; constitution of abietic acid and abietine, A., i, 1152.

Aschkenasi, Salo, hydration of ions, A., ii, 258.

hydration of electrolytes, A., ii, 482. William F. Asendorf, See Frank Burnett Dains.

Asher, Leon, and Ernst Bernet, physiology of the glands. LIH. Function of the spleen under normal and increased oxygen requirements, A., i, 491.

Asher, Leon, and Francis H. Doubler, physiology of the glands. XLIX. The respiratory interchange of the dog with extirpated spleen and diet deficient in iron, A., i, 286.

Asher, Leon, and Walter Horrisberger, the action of the thyroid gland hormone in phloridzin diabetes. XLVI.,

A., i, 293.

Asher, Leon, and Chu Koda, physiology of the glands. XLVIII. Experiments on the respiratory metabolism of the dog with extirpated spleen, A., i, 286.

Asher, Leon, and Gengo Matsumo, physiology of the glands. XLVII. The relations between the thymus, spleen, and bone-marrow, A., i, 298.

Ashley, Julius Nicholson. See Archibald Edwin Goddard.

Askenasy, Paul, and Frithjoe Grude, action of nitrogen on mixtures of barium oxide and earbon at high

temperatures, A., ii, 445.

Aston, Francis William, the isotopes of tin, A., ii, 650.

the mass-spectrum of iron, A., ii, 710. the isotopes of selenium and some other elements A., ii, 844.

Aston, Francis William, and R. H. Fowler, some problems of the mass spectrograph, A., ii, 241.

Astruc, A., E. Canals, and R. Bordier, estimation of the alkaloids in extract

of aconite, A., ii, 404.
Astruc, A., and E. Renaud, chloroform and pepsic digestion, A., i, 281.

Astrue, A. See also F. Jadin.

Aszódi, Zoltán, estimation of urea from the carbon dioxide produced by urease, A., ii, 536.

Atack, Frederick William, and Charles William Soutar, preparation of intermediates [3-chloro-2-aminoanthraand3-chloro-1-bromo-2quinone aminoanthraquinone] and a dyestuff of the anthraquinone series, A., i, 259. Atchley, Dana W. See Walter W. Palmer.

Aten, Adriaan Hendrik Willem, electro-

osmosis, A., ii, 114.

William Ringrose Atkins, Gelston, hydrogen-ion concentration of plant cells, A., i, 411.

relation of the hydrogen-ion concentration of the soil to plant distribution, A., i, 415, 509.

Atkinson, C. P., apparatus for use in

titrating intermediates with unstable diazo-solutions, A., ii, 237.

Atkinson, Ethel, and Edith Olive Hazleton, a qualitative test for tannin, A., ii, 793.

Atkinson, H. V., David Rapport, and Graham Lusk [with James Evenden and G. F. Soderstrom], animal calorimetry. XXII. The production of fat from protein, A., i, 966.

Aub, Joseph C., and James H. Means, the basal metabolism and the specific dynamic action of protein in liver disease, A., i, 193.

Aubart. See Otto Diels.

Aubel, E., the attack of dextrose and lævulose by the pyocyanic bacillus, A., i, 201.

Aubry, Pierre, detection of bismuth in urine, A., ii, 165.

Auerbach, Friedrich, and E. Bodländer, iodometric estimation of sugars, A., ii, 878.

Auerbach, Rudolf, substantive cotton dyeing, A., ii, 353.

Halvard. Augested-Jensen, See Wilhelm Steinkopf.

Auguste, C. See Michel Polonovski. Aurén, Tycho E:son, absorption of Xrays in crystals, A., ii, 810.

Ausenda, Camillo, the carbamino-reaction of the blood-proteins and their alleged importance in the transport of carbon dioxide by the blood, A., i, 1209.

Austin, Joshua Harold, Glenn E. Cullen, A. Baird Hastings, F. C. McLean, John P. Peters, and Donald D. van Slyke, gas and electrolyte equilibria in blood. I. Technique for collection and analysis of blood, and for its saturation with gas mixtures of known composition, A., i, 1207.

Austin, Joshua Harold. See John P. Peters, and Donald D. van Slyke.

Austin, Percy Corlett. See Thomas Martin Lowry.

Auwers, Karl von, [substitution processes], A., ii, 98.

the molecular refraction of aromatic " aromatic ' hydrocarbons \mathbf{and}

carbon, A., ii, 98.
Auwers, Karl von, E. Hilliger, and E. Wulf, the capacity for migration of acyl residues in acyl-derivatives of the phenylhydrazones of bydroxyketones, A., i, 1192.

Auwers, Karl von, and K. Hültenes, 3-phenylindazole and 2-hydroxy-3phenylindazole, A., i, 682.

Auwers, Karl von, and Helene Jacobsen, titrimetric and spectrometric analysis of keto-enol mixtures, A., ii, 168. Auwers, Karl von, and W. Jülicher,

transformation products of 1-methyl-1-trichloromethyl- $\Delta^{2:5}$ -cyclohexadiene-4-one, A., i, 841.

Auwers, Karl von, and H. Kolligs, molecular coefficients of refraction, A., ii, 174.

Auwers, Karl von, and H. Lange, halogenated indazoles and stereoisomerism of free indazoles, A., i, 684.

Auwers, Karl von, and K. Saurwein, 2-hydroxy-4:6-dimethylbenzaldehyde, hemimellitenol, and iso-\u03c4-cumenol, A., i, 1031.

Auwers, Karl von, and H. Westermann, the spectrochemistry of aliphatic dienes with conjugated double bonds, A., ii, 97.

Auwers, Karl von, and Karl Ziegler, hydrocarbons of the semibenzene group, A., i, 119.

carboxylic acids of the semibenzene

group, A., i, 139. chloro- and bromo-derivatives of alkylated cyclohexadienones, A., i. 144.

Avasare, Mahadeo Dattatraya. Kurerji Gosai Naik.

Avery, David, A. J. Hemingway, V. G. Anderson, and T. A. Read, estimation of minute amounts of lead in water, with notes on certain causes of error, A., ii, 161.

Avery, Pauline M. See Solomon Farley Acree, and R. R. Mellon.

Ayer, J. B., and H. E. Foster, the estimation of total albumin in the spinal fluid, A., ii, 798.

Azadian, A., silicotungstic acid applied to the estimation of caffeine, A., ii, 237.

B.

B., H., characteristics and utilisation of beech nut oil, A., i, 96. nutmeg butter, A., i, 975.

Babcock, Harold D. See Charles E. St. John.

Baborovsky, Jiri, and J. Velíšek, the hydration of the lithium-ion, A., ii,

Bach, Alexis, and Sophie Zubkowa, the ferment numbers of blood. I. Quantitative estimation of catalase, protease, peroxydase, and esterase in a drop of blood, A., i, 392.

Bach, Emerich. See Peter Rona.

Bachem, Carl, influence of lecithin on the excretion of veronal, A., i, 400. a new antiseptic with high iodine content (diethylene disulphide tetraiodide), A., i, 611.

Bachér, F. See Richard Stoermer.

Bachmann, Franz. See Ernst Sieburg. Bacho, Ferruccio de, volumetric method for the estimation of hyposulphurous and sulphoxylic acids, A., ii, 311.

Bachstez, Marcel, Pregl's solution, A., ii, 792.

Backer, Hilmar Johannes, and J. V. Dubský, the formation of salts of sulphocarboxylic acids. I. Cobaltons and cupric salts of sulphoacetic and a-sulphopropionic acids, A., i, 423.

Bacot, Arthur William, and Arthur Harden, vitamin requirements of Drosophila. I. Vitamins-B and -C,

A., i, 493.

Baddiley, James. See British Dyestuffs Corporation, Ltd.

Badische Anilin- & Soda-Fabrik, production of alcohols, ketones, and the like [lithium formate, methyl alcohol, acetone, etc.], A., i, 218.

introduction of arylamino-groups into aminoanthraquinones, A., i, 942. preparation of carbamide, A., i, 992.

Bäckström, Hans L. J., the solubilities of calcite and aragonite, A., ii, 849. Bähr, Hans. See Emil Knoevenagel.

Bäjen, Willy. See Erich Schmidt. Baer, Julius, localisation of the degradation of fats in the body, A., i, 490.

Baerts, Franz, the action of organomagnesium compounds on nitriles, A., i, 817.

Baggesgaard-Rasmussen, H., and Sven Werner, alkylations. I. Alkylation ot sodium sulphite, A., i, 104.

Baggesgaard-Rasmussen, H. See also Chr. Winther.

Bahlke, W. H. See T. H. Rogers. Bailey, George C., and Ralph S. Potter, synthesis of indigotin from fumaric acid and aniline, A., i, 370.

Bailey, James R. See Harry L. Lochte and De Witt Neighbors.

Bailey, Kenneth C., direct synthesis of carbamide starting from carbon dioxide and ammonia. A., i, 815.

Bailey, Robert Arthur. See Edward Charles Cyril Baly.

Bailey, V. A. See John S. Townsend. Bailleul, Gustav. See Friedrich Meyer. Bailly, Octave, the action of epichlorohydrin on normal sodium phosphate

in aqueous solution and the stability of a diglyceromonophosphoric diester, A., i, 980. Bain, Edgar C., and James R. Withrow,

relative densities of alkali metal amalgams and mercury. II., A., ii, 145.

Baines, Harry, the mechanism of the bromination of phenol in aqueous solution, T., 2811.

Bak, Ada. See I. M. Kolthoff.

Baker, Herbert Brereton, change of properties of substances on drying, T., 568.

Baker, Julian Levett, and Henry Francis Everard Hulton, amylases of the cereal grains; the insoluble amylase of barley, T., 1929. Baker, William E.

See Victor K. LaMer.

Balaban, Isidore Elkanah, and Frank Lec Pyman, bromo-derivatives of glyoxaline, T., 947.

Balareff, D., the structure of pyrophosphoric acid. III., A., ii, 49. estimation of zinc as zinc pyrophos-

phate, A., ii, 228.

suggestions for the construction of a periodic table on a wider basis, A., ii, 365.

separation of phosphoric acid in qualitative analysis, A., ii, 525.

behaviour of platinum on strong ignition, A., ii, 578. the estimation of sulphuric acid as

barium sulphate; evidence of the existence of a complex barium

sulphuric acid, A., ii, 864. win, Wilmer. See Alexander Baldwin, Lowy.

Bales, Sidney Hartley, and Stanley Arthur Nickelson, hydrolysis of BB,dichlorodiethyl sulphide; synthesis of divinyl sulphide and the preparation of a non-vesicant isomeride of BB'-dichlorodiethyl sulphide, T., 2137.

Ball, Nigel G. See Henry Horatio Dixon. Ballauf, Fritz. See Hans Heinrich

Schlubach.

Balls, A. K. See A. Elizabeth Hill. Baltes, Max. See Wilhelm Strecker.

Baly, Edward Charles Cyril, photosynthesis and the functions of pigments in the living plant, A., i, 307. catalysis with special reference to newer theories of chemical action. I. The radiation theory of chemical action. (3) A theory of chemical reaction and reactivity, A., ii, 628.

Baly, Edward Charles Cyril, and Robert Arthur Bailey, the equilibria in aqueous solutions of the alkali metal

bisulphites, T., 1813.

Baly, Edward Charles Cyril, and Herbert Maxwell Duncan, the reactivity of

ammonia, T., 1008.

Baly, Edward Charles Cyril, Isidor Morris Heilbron, and Donald Pryce Hudson, photocatalysis. II. The photosynthesis of nitrogen compounds from nitrates and carbon dioxide, T., 1078.

Bancroft, Wilder Dwight, mordants. I., A., ii, 551.

mordants. II. Alumina, A., ii, 646. mordants. III. Chrome, A., ii, 822. Bandemar, Selma L. See Charles S.

Robinson. Banerji, B. C., and Nilratan Dhar, catalysis. XIV. The action of nitric acid on metals, and an example of a periodic reaction, A., ii, 756.

Banerji, B. C. See also Phani Bhusan Ganguly.

Banus. See Garcia Banus.

Barbier, André. See Amé Pictet.

Barbour, Henry G. See Raymond L. Stehle.

Barcroft, Joseph, A. V. Bock, Archibald Vivian Hill, T. R. Parsons, W. Parsons, and R. Shoji, the hydrogenion concentration and some related properties of normal human blood, A., i, 891.

Barcroft, Joseph, and M. Nagahashi, direct measurement of the partial pressure of oxygen in human blood,

A., i, 890.

Barendrecht, Hendrick Pieter, the enzyme phosphatase-phosphatese, A., i, 67. Barham, G. Basil, estimation of sulphur

dioxide, A., 11, 520,

Barker, E. F., carbon dioxide absorption in the near ultra-red, A., ii, 805.

Barker, Thomas Vipond. See Gilbert Thomas Morgan.

Barlot, J., and (Mlle) M. T. Brenet, detection of fatty acids by the formation of their sodium uranyl salts, A., ii, 167.
Barnett, Edward de Barry, picolinoyl-

aminoanthraquinones, A., i, 943.

Barnet, Edward de Barry, and James Wilfred Cook, pyridinium salts derived from some chloroacetylaminocompounds, T., 792.

studies in the anthracene series. II.,

T., 1376.

Barnett, Edward de Barry, James Wilfred Cook, and Herbert Henry Grainger, studies in the anthracene series. III., T., 2059.

Barnett, Edward de Barry, and L. J. Kay, dinitrobenzil, A., i, 844.

Barnett, W. Leigh, syntheses with chloroacetyl chloride, A., i, 232.

Barr, Guy, and Louis Leighton Bircumshaw, viscosity of some cellulose acetate solutions, A., i, 232.

Barratt, S. See Thomas Ralph Merton. Barratt, Thomas, and J. W. Lewis, the heat developed by the action of sodium hydroxide on cotton ("mercerisation"), A., i, 526.

Barrenscheen, Hermann K., lævulosuria, A., i, 496.

Barrenscheen, Hermann K., and O. Weltmann, a reaction of urea with p-dimethylaminobenzaldehyde, A., ii, 794.

Barrenscheen, Hermann K. See also Hans Fischer.

Barrett, Gérald. See Charles Moureu. Barrow, Fred, Evan Dalton Griffiths, and Edward Bloom, N-oximino-ethers. II. N-Aryl ethers of 2:4- and 2:6dinitrobenzaldoximes, T., 1713.

Barry, Frederick, maintenance of the adiabatic condition in calorimetry,

A., ii, 473.

Barsky, George. See Ralph H. McKee. Barsky, Joseph. See Max Kahn.

Bart, Heinrich, synthesis of aromatic arsinic acids, A., i, 1201.

synthesis of aromatic arsinic acids by the interaction of isodiazo-compounds with the arsenite ion, A., i,

two new syntheses of salvarsan base (mm'-diamino-pp'-diliydroxyarseno-

benzene), A., i, 1202. Bartell, Floyd E., and E. J. Miller, adsorption of activated sugar charcoal. I., A., ii, 741.

Bartell, Floyd E., and L. B. Sims, relation of anomalous osmosis to the swelling of colloidal material, A., ii,

Bartels, R., $\quad \text{and} \quad \textit{Arnold} \quad$ Eucken, equation of condition of nitrogen at small pressures and low temperatures, A., ii, 117.

Bartels, R. See also Herbert Froundlich. Bartholomé, Walter. See ErichSchmidt.

Barthoux, J., minerals fro Oudjda, Morocco, A., ii, 651. Bartlett, Edward P. See J., minerals from near

See Theodore William Richards.

Bartlett, H. H. See W. Ellwood Cake, and Charles E. Sando.

Baru, R. See Benjamin Max Margosches.

Basch, E. See Robert Meyer-Bisch.

Bass, Lawrence W. See Oskar Baudisch, and Treat Baldwin Johnson.

Bassett, Henry, and Reginald Graham Durrant, action of ammonium nitrate and of aqueous ammonia on copper; properties of cupric tetrammine nitrite and nitrate, T., 2630.

Batchelor, H. W. See P. L. Gainey.

Bate, Stanley Charles. See British Dyestuffs Corporation, Ltd.

Batta, G., and H. Thyssen, estimation of carbon in cast iron and steel by Corleis's apparatus, A., ii, 395.

Battegay, Martin, and J. Bernhardt. the carbamides of anthraquinone, A., i, 1041.

the urethanes of anthraquinone, A., i, 1041.

Battegay, Martin, and Ph. Brandt, nitration of hydrocarbons in basic or neutral medium, A., i, 1001.

Battegay, Martin, Ph. Brandt, and J. Moritz, action of light on 9-nitroanthracene, A., i, 1001.

Battegay, Martin, and J. Claudin, the dibromoanthraquinones, A., i,

the dibenzoyldiaminoanthraquinones, A., i, 43.

Battegay, Martin, and G. Hugel, 3:6tetramethyldiaminocyanoselenopyron-

in, A., i, 669. Battelli, Fred, and (Mlle) Lina Stern, mechanism of action of oxidising and

reducing ferments, A., i, 1077.

Batuecas, T., the compressibility at 0° and less than 1 atmosphere and the divergence from Avogadro's law of II. Ethylene, A., ii, several gases.

Batuecas, T. See also Philippe Auguste Guye.

Bau, Arminius, fermentation without yeast, A., i, 307.

the oxalic acid content of early spring leaves, and some observations concerning this acid, A., i, 309.

Baudisch, Oskar, mechanism of reduc-tion of nitrates and nitrites in pro-

cesses of assimilation, A., i, 194. Baudisch, Oskar, and Lawrence Bass, iron as photochemical catalyst. I. The decomposition of potassium ferrocyanide in daylight, A., i, 993.

Baudisch, Oskar, and Harry J. Deuel, acetol. I. A new test for carbohydrates, A., ii, 664.

Baudisch, Oskar, and Treat Baldwin Johnson, new method for the detection of thymine, A., ii, 238.

Baudisch, Oskar. See also Harry J. Deuel, and Treat Baldwin Johnson.

Baudouin, A., and H. Benard, a microcolorimeter and nephelometer, A., ii, 862.

Baudrenghien, J., Δ^{α} -butene- γ -ol [α methylallyl alcohol], A., i, 710.

Bauer, Edouard. See Albin Haller.

Bauer, F. C., and A. R. C. Haas, the effect of lime, leaching, form of phosphate, and nitrogen salt on plant and soil acidity, and the relation of these to the feeding power of the plant, A., i, 975.

Bauer, K. Hugo, and R. Hardegg, perilla oil, A., i, 983.

Bauer, K. Hugo, and K. Herberts, china wood oil, A., i, 806.

Bauer, K. Hugo, and Fritz Werner, the condensation of a-halogeno-ketones with aldehydes, A., i, 1034

See J. Volney Bauer, Lawson H. Lewis.

Walter F., and George Baughman, Samuel Jamieson, the chemical composition of maize oil, A., i, 414.

Bauman, L., and L. M. Keeler, estimation of uric acid in blood, A., ii, 796.

Baumann, K., barium in the viscera, A., i, 898.

Baumgarten, Paul. See Helmut Scheibler.

Baur, Emil, and Haggenmacher, photolysis of uranyl oxalate, A., ii, 338.

Baur, Emil, and Eugen Herzfeld, fermentation without yeast, A., i,

rennet coagulation of milk as a stimulated process, A., i, 284. peptone fermentation, A., i, 1097.

Baur, Emil, and Adolf Rebmann, photolysis of uranyl oxalate and uranyl acetate, A., ii, 337.

Baur, Fr., and E. Oppenheimer, theory of the retention and excretion of absorbed bromine salts, and the halogen content of the organism, A., i, 968.

Baxter, Gregory Paul, [revision of the atomic weight of lanthanum], A.,

ii, 298.

Twenty-eighth Annual Report of the Committee on Atomic Weights; determinations published during 1921, A., ii, 366.

significance of the density of hydrogen bromide with reference to the atomic weight of bromine, A., ii,

purity of atomic weight silver. II. Solid impurities, A., ii, 377.

Baxter, Gregory Paul, and Leon Woodman Parsons, purity of atomic weight silver. I. Gases in pure silver and iodine, A., ii, 376.

Baxter, Gregory Paul, and A. F. Scott, atomic weight of boron, A., ii, 285.

Bayer, Gustav, the change of glycogen under the influence of light, A., i, 323.

Bayeux, Raoul, subcutaneous absorption of oxygen in mountain climbing and aviation, A., i, 79.

Bazzoni, Charles Blizard. See Owen Willans Richardson.

Beaver, J. J. See James Kendall.

Bechhold, Heinrich, and F. Hebler, nephelometry of coloured hydrosols, A., ii, 652.

effect of nephelometric colloidal systems of different size of particles, A., ii, 693.

turbidity standard, A., ii, 693.

Beck, Georg. See Israel Lifschitz.

Beck, R. Ph., the electromotive properties of magnesium and the potentiometric and thermal analysis of the system magnesium-mercury, A., ii, 545.

Bečka, J., refractometric and interferometric quantitative analysis, A., ii, 715.

Becker, Aug., the durability of radium solutions, A., ii, 810.

Becker, Alfred Gustav. See Edmund Speyer.

Becker, A. L. See R. A. Sawyer.

Becker, Ernst, identification of oxycellulose by means of the barium compound, A., ii, 94.

Becker, Ernst. See also Carl Gustav Schwalbe.

Becker, Günther. See Edmund Speyer. Becker, K., and Willi Jancke, Rontgen spectroscopic investigation of organic compounds. I. and II., A., ii, 128.

Becker, Oscar, and Jocelyn Field Thorpe, the intermolecular condensation of methyl ethyl ketone in the presence of

calcium oxide, T., 1303. ecker, Paul. See Georges Chavanne, Becker, Paul. and Herman Decker.

Beckmann, Ernst, a sodium press for the laboratory, A., ii, 369.

Beckmann, Ernst, and Erich Correns [with Otto Liesche], migration of the methyl residue into the benzene nucleus; the transformation of methylaniline hydrochloride into toluidine hydrochloride, A., i, 535.

Hofmann's degradation of acid amides

to amines, A., i, 544.

Beckmann, Ernst, and Otto Liesche, extension of ebullioscopy and its applica-

tion to binary mixtures, A., ii, 117. Beckmann, Ernst, Otto Liesche, and FritzLehmann, physico-chemical characterisation of lignin from winter rye straw, A., i, 233.

Bédos, Pierre. See Marcel Godchot.

Behre, E., and A. Düring, estimation of sucrose in presence of other sugars by means of alkaline-earth hydroxides, A., ii, 790.

Behre, C. H., jun., native antimony from Kern County, California, A., ii, 76.

Behre, Jeanette Allen, and Stanley Rossiter Benedict, creatine and creatinine metabolism. IV. The question of the occurrence of creatinine and creatine in blood, A., i, 789.

Behrendt, Hans, the influence of the chemical composition and the physicochemical structure on the function of frog muscles, A., i, 197.

Beisler, Walter H., and Lauder William Jones, 1-hydroxylaminoanthraquinone and some of its derivatives, A., i, 1166.

EmilBell. James.See **Alphonse** Werner.

Bell, James Munsie, and Joseph L. McEwen, nitrotoluenes. VIII. Binary systems of m-nitrotoluene with another nitrotoluene, A., i, 726.

Belladen, L., the system Bi₂O₃-PbO, A., ii, 777.

Bellis, B. See G. C. Supplee.

Bellussi, Angelo, chemical reaction of phenol, A., ii, 723.

Benade, Walter. See Gustav Heller.

Bénard, H. See A. Baudouin.

Benda, Ludwig, arsenical acridine compound, A., i, 888.

Benedetti-Pichler, A.,quantitative micro-analysis of mixtures with special reference to organic ultimate analysis, A., ii, 656.

Benedicenti, Alberico, and S. Rebello-Alves, electric kataphoresis of metallic protein compounds obtained by treatment with powdered metals, A., ii,

Benedicks, Carl, the Le Chatelier-Braun principle, A., ii, 358.

Benedict, Anber J. See Samuel Edward Sheppard.

Benedict, Stanley Rossiter, estimation of uric acid in blood, A., ii, 405.

Benedict, Stanley Rossiter, and Elizabeth Franke, direct estimation of uric acid in urine, A., ii, 669.

Benedict, Stanley Rossiter. See also Jeanette Allen Behre, Thomas P. See also Nash, jun., and R. C. Theis. Benelli, M. See P. Leone.

Bengtsson, Ernst. See Erik Hulthén. Bennett, Alexander Hutcheon, and F. K. Donovan, the estimation of aldehydes and ketones by means of hydroxylamine, A., ii, 535.

Bennett, George Macdonald, autoreduc-tion of sulphurous acid, T., 1794. monothiethylene glycol, T., 2139.

Benoist, Eugène. See Albin Haller.
Benrath, Alfred, W. Bücher, and H.
Eckstein, chloroiridiates of complex metal bases, A., ii, 515.

Benrath, Alfred, and K. Drekopf, electrical conductivity of salts and

mixtures of salts, A., ii, 109. Benrath, Alfred, and H. Espenschied, thallie-thallous sulphate. I., A., ii, 504.

Benrath, Alfred, E. Hess, and A. Obladen, chemistry of actinometers, A., ii, 731.

Benrath, Alfred, and J. Oberbach, behaviour of Fehling's solution in light, A., i, 108.

Benrath, Alfred, and A. Obladen, the photochemical reduction of titanium

salts, A., ii, 731.

Bentivoglio, (Miss) Marie. See John Read.

See Gabriel Bertrand. Benzon, B.

Berényi, Ludwig, the calculation of adsorption of vapours at different temperatures, A., ii, 426.

Beretta, A. See G. Charrier. Bergdahl. See Bernhard Neumann.

Bergell, Peter, new diamine compounds, A., i, 720.

the nature of specific poisons, A., i,

Berger, Ernst, the reduction of oxides by hydrogen, A., ii, 508.

Berger, Ernst, and G. Crut, the equi-

librium in the reduction of nickel chloride by hydrogen, A., ii, 38.

Berger, Emily V. See Hamilton Perkins Cady.

Berger, G. See Frans Maurits Jaeger. Berger, W. See R. Doerr.

Bergh, A. A. Hijmans van den, sulphohæmoglobinæmia, A., i, 793.

Berglund, Hilding. See Otto Folin.

Bergman, A. G., reactions of combination with conjugated systems of double linkings. I. Bromination of isoprene, A., i, 1106.

reactions of combination with conjugated systems of double linkings. II. Combination of hydrogen bromide with di-isopropenyl $[\beta\gamma$ dimethyl- A 7-butadienel, A., i, 1106.

Bergman, Stig. See Hans von Euler. Bergmann, Max, degradation of d-saccharic acid to the dialdehyde of l-tartaric acid, A., i, 7.

Bergmann, Max, and Arthur Mickeley, the unsaturated reduction products of sugars and their transformations. IV. A glucoside-like derivative of a simple hydroxyketone, 8-acetyl-n-butyl alcohol; the constitution of fructose, A., i, 618.

Bergmann, Max, Herbert Schotte, an l Wolfgang Lechinsky, unsaturated reduction products of the sugars and their transformations. III. 2-Deoxy-glucose (glucodesose), A., i, 227. Bergmann, Max, Reinhold Ulpts, and

Francisco Camacho, aldehyde com-pounds of hydroxy-amines and the partial acylation of these amines, A., i, 1180.

Bergstrom, F. W., vapour pressure of sulphur dioxide and ammonia, A., ii,

Berkeley, Cyril, an organic constituent of the tube of Mesochætopterus Taylori, Potts, A., i, 400.

occurrence of manganese in the tube and tissues of Mesochætopterus Taylori, Potts, and in the tube of Chætopterus variopedatus, Renier, A., i, 493.

Berkmann, Sophie. See N. Isgarischev. Berl, Ernst, the estimation of benzene

in gases, A., ii, 591.

Berl, Ernst, and W. Schwebel, separation of volatile substances from gases which are absorbed with difficulty. II. Use of cresols, A., i, 932. additive products between cresols and

alcohols, etc., A., i, 932. Berlingozzi, Sergio. See Mario Betti.

Bernard, Henri. See Pastureau.

Bernardi, Alessandro, and G. Rossi, action of carbon disulphide on mercuric acetate, A., i, 421.

Berndt, W. See K. A. Schaller.

Bernet, Ernst. See Leon Asher.

Hermann. Jakob Bernhard, Meisenheimer.

Bernhardt, J. See Martin Battegay.

Bernoulli, August L., and Heinrich Jakubowicz, velocity of decomposition of mono- and di-substituted malonic acids, A., ii, 40.

Bernoulli, August L., and Fritz Schaaf, benzaldehyde-copper and the hetero-

geneous rate of formation of this substance, A., i, 1029.

Bernton, A., diphenylphosphoric acid [diphenyl hydrogen phosphate], a reagent for the amino-group, A., i, 1146.

Berry, Arthur John, studies on thallium

compounds. I. Analytical, T., 394. Berry, Erwin H. See Arthur E. Paul. Bers, G. H. C. van. See A. Vürtheim.

Berthelot, Albert, antiseptic action of acraldehyde, A., i, 903.
Berthoud, Alfred, the physical properties

of sulphur trioxide, A., ii, 638.

Bertiaux, L., rapid analysis of white metal and similar alloys, A., ii, 396. Berton, A. L. See Gustave Vavon.

Bertrand, Gabriel, and B. Benzon, the importance of zinc in the feeding of animals; experiments on mice, A., i, 893.

Bertrand, Gabriel, Freundler, and (Mlle) Y. Ménager, the variations in the chemical composition of seawater and the evaluation of the saline content, A., ii, 441.

Bertrand, Gabriel, and M. Mokragnatz, the presence of cobalt and nickel in

arable soil, A., i, 975.

the occurrence of cobalt and nickel in plants, A., i, 1099.

Bertrand, Gabriel, and (Mme) M. Rosenblatt, the distribution manganese in the organism of higher plants, A., i, 95.

the variation in the manganese content

of leaves with age, A., i, 411.

Bertrand, Gabriel, and R. Vladesco, the zinc content of the organs of the rabbit and of some vertebrates, A., i, 493.

Albrecht, influence Bethe, of hydrogen-ion concentration on the permeability of dead membranes, on adsorption by protein sols, and on the metabolism of cells and tissues, A., ii, 352.

Bettag, Ludwig. See Heinrich Wieland. Betti, Mario, and Sergio Berlingozzi, isomerism of the isooxazolecarboxylic acids. VI., A., i, 52.

Beutler, Hans. atomic linkings in the carbon compounds. I. and II., A., ii, 259.

method of formation of the atoms in carbon compounds, A., ii, 348.

Beyer, P. H., nitration, chlorination, and bromination of m-hydroxybenzoic acid, A., i, 37.

Beyersdorfer, P., the explosions of varieties of organic dust; experimental investigation of the simple case of sugar dust, A., ii, 749.

Beyne, Edgar, apparatus for the gasometric estimation of zinc in zinc powder, A., ii, 85.

Beyschlag, C. See Georg Schroeter.

Bhatnagar, Shanti Swarupa, reversal of phases in emulsions and precipitation of suspensoids by electrolytes, A., ii, 204.

pure aniline and water emulsions,

A., ii, 268.

Bichowsky, F. Russell, equilibrium in the reaction between sulphur dioxide

and water, A., ii, 270.

Biedermann, W., the action of pepsin and trypsin on diastase, A., i, 480. regeneration of diastase and its de-

pendence on oxygen, A., i, 698. the diastatic action of albumoses and

amino-acids, A., i, 1200.

Biedermann, W., and Amin Rueha, enzymes. VIII. Conditions of action of amylases, A., i, 65.

Bieler, E. S. See James Chadwick. Bielich, (Frl.) F. See Fritz Arndt.

Bierry, Henri, and L. Moquet, estimation of total protein, of protein and non-protein nitrogen in blood plasma, A., ii, 886.

Bierry, Henri. See also Alexandre Desgrez.

Bigelow, Lucius A., oxidation of sidechains with potassium permanganate. II., A., i, 998.

Bigiavi, Dino, glyoximes and peroxides, A., i, 352.

Bigiavi, Dino. See also Angelo Angeli. Biilmann, Einar, and Hakon Lund, the quinhydrone electrode, A., ii, 111.

Bijvoet, J. M., and A. Karssen, use of Röntgen rays in determining the structure of the crystals of lithium and of some of its compounds with

light elements. I., A., ii, 499. structure of crystals of lithium and some of its compounds with light II. Lithium hydride, elements.

A., ii, 569.

Billon, (Mlle) Helene, the action of trimethylene chlorobromide on some aliphatic ketones, A., i, 717.

Billows, Edoardo, tridymite from the Euganean Hills, Italy, A., ii, 578.

Biltz, Heinrich, 7:9-dialkyldeoxyuric acids. I., A., i, 380.

z, Heinrich, and Hans Bulow, 7:9-dialkyldeoxyuric acids. II. Biltz, 7:9-Dimethyldeoxyuric acid, A., i,

7:9-dialkyldeoxyuric acids. III. 7-Methyl-9-ethyldeoxyuric acid. A., i, 382.

7:9-dialkyldeoxyuric acids. 1:7:9-Trimethyldeoxyuric acid, A., i, 383.

7:9-dialkyldeoxyuric acids. 7:9-Diethyldeoxyuric acid, A., i,

9-methyl-8-iodo- $\Delta^{7:8}$ -isoxanthine, A., i, 384.

Biltz, Heinrich, and Dorothea Heidrich, 7:9-dialkyldeoxyuric acids. 9-Methyl-7-ethyldeoxyuric acid, A., i. 382.

7:9-dialkyldeoxyuric acids. 1:3:7:9-Tetramethyldeoxyuric acid, A., i, 383.

Biltz, Heinrich, and Hans Paetzold, the two modifications of glycine; methylation with diazomethane, A., i, 528.

Biltz, Heinrich, Karl Seydel, and Edith Hamburger-Glazer, decompositions occurring in the acylation of 5:5-diphenyltetrahydro-4-glyoxalone, A., i, 871.

Biltz, Wilhelm, constitution of haloids, A., ii, 370.

some linear relationships in the periodic system, A., ii, 494.

Biltz, Wilhelm, and Wilhelm Fischer, the ammoniates of lead haloids; mixed compounds and the parent salts, A., ii, 851.

Biltz, Wilhelm, and Georg Hohorst, heat of formation of compounds of metallic magnesium with metallic zinc, cadmium, aluminium, calcium, A., ii, 350.

Biltz, Wilhelm, and Gustav F. Hüttig, ammoniates of magnesium haloids, A., ii, 59.

Biltz, Wilhelm, and Wilhelm Stollenwerk, ammoniates of cupro- and

thallo-haloids, A., ii, 67.
Biltz, Wilhelm, and Arthur Voigt, are tantalum and columbium pentachlorides conductors of electricity in

the fused state? A., ii, 302.
Biltz, Wilhelm, and Walter Wein, the measurements of the densities of the haloids of aluminium with mercury as pyknometer liquid, A., ii, 505.

Binaghi, R., Digitalis purpurea growing wild on the uplands of Desulo (Sardinia), A., i, 412.

action of polyhalogenated compounds of methane and ethane on magnesyl [magnesium alkyl] compounds. II.,

A., i, 1002.

Binaghi, R. See also Bernardo Oddo. Binapfi, Joseph. See Rudolf Pummerer. Binda, Pietro,experimental hæmatoporphyria, A., i, 89.

Binder, \vec{F} . Otto H., constitution and heats of combustion, A., ii, 27.

Binet, Léon. See Ch. Achard.

Binkert, A. See Hermann Staudinger. Binswanger, Friedrich, effect of carbon

dioxide on sugar in blood, A., i, 962.

Birch, Stanley Francis, and Jocelyn

Field Thorpe, the formation and stability of spiro-compounds. The influence on stability of groups of high molecular weight, T., 1821.

Birckenbach, Lothar. See Otto Hönigschmid.

Bircumshaw, Louis Leighton, the surface tension of mixtures of alcohol and water at 25°, T., 887.

Bircumshaw, Louis Leighton. See also Guy Barr.

Bischof, Friedrich. See Paul Horrmann. Bishop, Edna R., Esther B. Kittredge, and Joel H. Hildebrand, titrations in ethyl alcohol as solvent, A., ii, 308.

Bishop, Gerald, and Oscar Lisle Brady, 2:4-dinitrobenzil, T., 2364.

Bishop, John Egbert. See Charles August Kraus.

Bistrzycki, Augustin, and Bruno Brenken, sulphur as the bridge atom in the middle ring of a derivative of anthracene, A., i, 268.

Bistrzycki, Augustin, and Franz Kuba, nuclear condensations of ethers of phenylmercaptan. I., A., i, 33.

Bittner, Karl. See Rudolf Pummerer. Bjerrum, Niels, chromithiocyanates. I., II., III., and IV., A., i, 18, 19, 20,

Bjure, Alfred, and John Svensson, the effect of adrenaline on healthy indiv:duals, A., i. 970.

Black, E. M., M. Hupper, and J. Rogers, the effects of adrenal feeding on the iodine content of the thyroid gland, A., i, 966.

Black, Ian Armstrong, Edmund Langley Hirst, and Alexander Killen Macbeth, the labile nature of the halogen atom VI. The in organic compounds. action of titanous chloride and of ammonia on representative halogen compounds, T., 2527.

Blagden, John William. See Howard & Sons, Ltd.

Blair, Ethelbert William, and Thomas Sherlock Wheeler, the oxidation of hydrocarbons, with special reference to the production of formaldehyde, A., i, 917.

improved form of gas-analysis apparatus, A., ii, 519.

Blair, Ethelbert William. See also Thomas Sherlock Wheeler.

Blair, J. S., and J. M. Braham, mechanism of guanidine formation in fused mixtures of dicyanodiamide and ammonium salts, A., i, 1123.

Blaise, Edmond Emile, and (Mlle) Montagne, action of thionyl chloride on α-hydroxy-acids, A., i, 520, 715.

Blanc, Louis Gaston. See Maurice François.

Blanner, Julia E. See Thomas Bailey Aldrich.

Blatherwick, Norman R., blood fat in diabetes, A., i, 89.

Blatherwick, Norman R., and M. Louisa Long, urinary acidity. I. Some effects of drinking large amounts of orange

juice and sour milk, A., i, 967. Blatt, A. C. See George W. Raiziss. Blechta, F., trimethylene dinitrate, A.,

i, 518. Bleibtreu, Max, isolation of the coagulating enzyme from blood-serum,

A., i, 1084. Bleyer, Benno, and R. Seidl, ultramicroscopic investigation of casein, A., i, 386.

casein from cow's milk, A., i, 479.

Bloch, Ernst. See Peter Rona.

Bloch, Ignaz, and Fritz Höhn, symmetrical dichlorodimethyl sulphide, A., i, 218.

Bloedorn, W. A., and J. E. Houghton, the rôle of hexamethylenetetramine in the production of hæmaturia, A., i, 1091.

Blohm, G. J.son, Carl Gustaf Santesson. and Hans von Euler, physiological researches on vitamin-B and watersoluble biocatalysts, A., i, 1218.

Blom, Axel Viggo, new derivatives of diphenylamine, A., i, 27. preparation of nitroanisole from nitro-

chlorobenzene, A., ii, 38.

Blondeau, Joseph, some dialkylated benzyl cyanides [phenylacetonitriles] and the corresponding alcohols. amides, amines, and acids, A., i,

Bloom, Edward. See Fred Barrow. Bloomfield, J. J. See Sidney H. Katz.

Bloor, W. R., lipæmia, A., i, 89. nephelometric method for the estima-

tion of phosphoric acid and its compounds in small quantities of blood, A., ii, 84.

Bloor, W. R., K. F. Pelkan, and D. M. Allen, estimation of fatty acids (and cholesterol) in small amounts of blood plasma, A., ii, 593.

Bloor, W. R. See also Elsie Hill.

Blühdorn, K., calcium and phosphoric

acid metabolism with large doses of calcium and sodium phosphate, A., i,

Blumenthal, M. See W. D. Treadwell. Blunt, Katharine, Alta Nelson, and Harriet Curry Oleson, basal metabolism of underweight children, A., i, 83.

Boas, Friedrich, the part played by lipoids in the metabolism of plant I. and II., A., i, 94, 613. action of saponins on yeast-cells, A., i,

502.

Bock, A. V. See Joseph Barcroft.

Bock, Johannes, and Poul Iversen, phosphate excretion in the urine during water diuresis and purine diuresis, A., i, 1090.

Bodansky, Meyer, zinc and copper content of the human brain, A., i, 194.

Bode, G., and K. Hembd, the manganese content of potatoes, A., i, 415.

Bodenstein, Max, Friedrich Boës, (Frl.) Lindner, and Ramstetter, formation and decomposition of the higher nitrogen oxides, A., ii, 372.

Bodforss, Sven, influence of substituents on various chemical reactions, A., ii, 698.

Bodforss, Sven, and Per Frölich, electrical colloid synthesis, A., ii, 826.

Bodforss, Sven. See also Oscar Olsson Collenberg.

Bodine, J. H., anæsthetics and carbon dioxide output. I. The effect of anæsthetics and other substances on the production of carbon dioxide by certain orthoptera, A., i, 889.

Bodländer, E. See Friedrich Auerbach. Boecker, Eduard, the distribution of quinine alkaloids in the animal organism, A., i, 896.

Boedecker, Fr., and H. Volk, unsaturated bile acids. III. The relationships of apocholic acid, dioxycholenic acid [m. p. 260°], and cholic acid to deoxycholic acid, A., i, 1027.

Boës, Friedrich. See Max Bodenstein.

Böeseken, Jacob, dislocation theory of actolysis A. ii, 755

catalysis, A., ii, 755.

Böeseken, Jacob, and C. de Graaff, the configuration of the \(\beta\)-phenylglyceric acids and phenylglycidic acid, A., i,

Böeseken, Jacob, Chr. van Loon, H. G. Derx, and P. Hermans, condition of motion of molecules in space, A., ii,

Bögel, J. See Fritz Verzár.

Böhm, Karl. See Ernst Späth. Böhme, Otto. See Karl Freudenberg.

Boehringer & Söhne, C. F., preparation of nitrosulphonic acids of hydrogenated cinchona alkaloids, A., i, 46.

preparation of aminosulphonic acids of hydrogenated cinchona alkaloids, A., i, 46.

Boenheim, Felix, chlorine metabolism in

pulmonary tuberculosis, A., i, 1092. Bönniger, Max, the dextrose content of the red blood-corpuscles of man and their behaviour in isotonic sugar

solutions, A., i, 606.

Boeree, Alford Reginald. See Dalziel

Llewellyn Hammick.

Boessneck, Werner. See Gustav Heller. Bogdándy, Stefan von, the estimation of chlorine in organic material, A., ii, 519.

Bogert, Marston Taylor, and Emanuel M. Abrahamson, thiazoles. I. Derivatives of 2-phenylbenzthiazole; synthesis of an analogue of cinchophen (atophan), A., i, 576.

Bogert, Marston Taylor, and Yü-Gwan Chen, selenium organic compounds. Synthesis of 4-seleno-2-methylquinazolone, 2-phenylbenzoselenazole, and some derivatives of the latter, A., i, 1182.

Bogert, Marston Taylor, and Martin Meyer, thiazoles. II. 1-p-Tolybenzothiazole, dehydrothio-p-toluidine and some related compounds, A., i, 868.

Boggio-Lera, Enrico.See ArnaldoPiutti.

Bogitch, B., the expansions of some refractory materials at high temperatures, A., ii, 115.

Bogue, Robert Herman, swelling and gelation of gelatin, A., i, 388. the sol-gel equilibrium in protein

systems, A., i, 782. the structure of elastic gels, A., i,

viscosity of gelatin sols, A., ii, 122.

Bohn, Raymond T. See George Leslie Kelley.

Bohr, Niels, atomic structure, A., ii, 277.

Bohr, Niels, the structure of the atom and the physical and chemical properties of the elements, A., ii, 363.

the difference between series spectra of isotopes, A., ii, 598.

quantum theory of line spectra, A., ii, 801.

Boiry, F., the vulcanisation of caoutchouc in solution, A., i, 848.

Bokorny, Thomas, behaviour of diastase and other enzymes under unfavourable conditions; action of some nitrogenous compounds on germination, A., i, 93.

urea as a nutrient of yeasts and other plants, A., i, 1096.

urea and hippuric acid as nutrient materials for plants, A., i, 1222.

Bolland, A., a microvolumenometer, A., ii, 221.

Bollman, J. See William H. L.Welker.

Bollmann, Martin. See Ctto Fischer.

Bolte, Fr. See Julius Tröger. Bonacker, Iris. See Walther Borsche. Bone, William Arthur, ArchibaldRamsden Pearson, Eric Sinkinson, and W. E. Stockings, researches on the chemistry of coal. II. The resinic constituents and coking propensities of coals, A., ii, 285.

Bonin, P. See L. Dede. Bonino, G. B., action of potassium ferrocyanide on silver haloids, A., ii,

Bonis, A., volumetric estimation of lead peroxide in miniums; practical modification of Diehl's method, A., ii, 587.

Bonis, A. See Ed. Moreau.

Bonnet, Eugène, action of soluble lead salts on plants, A., i, 412.

Bonnet, M., and J. Haushalter, detection of urea in tissue by means of xanthydrol, A., ii, 794.

Bonnier, the estimation of alkali carbonates in presence of phenolphthalein, A., ii, 869.

Booberg, Gunnar. See J. Arvid Hedvall.

Boomer, E. H. See Otto Maass.

Boord, Cecil E., and F. F. Cope, the action of selenium monochloride on propylene, butylene, and amylene,

A. i, 421.

Boord, Cecil E. See also Alpheus W. Smith.

Bordier, R. See A. Astruc.

Boresch, Karl, water-soluble colouring matters of the Schizophyceæ, A., i, 210. orgström, Johan Henrik Leonard,

Borgström, Johan estimation of magnesium and alkalis in minerals, A., ii, 659.

Bornemann, G., preparation of bright metallic sodium and potassium, or their alloys, in nitrogen, A., ii, 444. the composition of Scheele's green,

A., ii, 852.

Bornemann, Karl, and O. Hengstenberg, the specific heats of some sulphides used in metallurgy, with special reference to high temperatures, A., ii,

Bornstein, A., and Kurt Holm, respiratory metabolism in alimentary

glycemia. I., A., i, 890.

Bornstein, A., and Johannes Kerb, distribution of chloride and water after poisoning with mercuric chloride, A., i, 404.

Bornstein, A., and Elisabeth Müller, respiratory metabolism and glycæmia, A., i, 392.

Bornstein, A., and Robert Vogel, action of pilocarpine on the composition of

the blood, A., i, 80.
Bornstein, A. See also Robert Vogel. Borsche, Walther, and Iris Bonacker, fission of γ -pyrone by aniline and N-phenyl-4-pyridone, A., i, 50.

Borsche, Walther, and F. Hallwass, the constitution of the bile acids. Reductodehydrocholic acid, A., i, 1158.

the constitution of the bile acids. Transformations from the cholic to the lithocholic acid series, A., i, 1159.

Borsche, Walther, and Robert Meyer, isatin and its derivatives. III. 5:5'-Di-isatylmethane and its conversion into quinoline derivatives, A., i, 53.

isatin and its derivatives. IV. The action of hydrazine on isatin and 1-methylisatin, A., i, 53.

deoxyindigotin, A., i, 55.

Borsche, Walther, O. Weickert, and Robert Meyer, the bile acids. III. Biloidanic acid [Letsche's acid], A., i, 255.

Bosanquet, C. H. See WilliamLawrence Bragg.

Bose, M. N. See Harold Edward Annett. Bosman, Louis Pierre, castelin, a new glucoside from Castela Nicholsoni, T., 969.

Bosse, O. See H. von Wartenberg. Heinrich. Elektro-**Bos**shard, See chemische Werke G. m. b. H. Bossi, A. See W. D. Treadwell.

Bossuet, Robert. See Pierre Jolibois. Boswell, Maitland Crease, and H. E. Corman, preparation of anhydrous formic acid, A., i, 712.

Bothe, W. See Hans Geiger. Botolfsen, Erling, calcium carbide, A., i, 1107.

calcium-ammonium, A., ii, 570.

Boucher, Paul Edward, measurement of the resonance, radiation, and ionisation potentials of several gases and vapours, A., ii, 608.

Boudin, Paul. See Albin Haller.

Bougault, J., and R. Gros, new analytical applications of Nessler's reagent; characterisation of ketones; estimation of aldehydes, A., ii, 666.

acetone in commercial ammonia, A., ii, 709.

Boulanger, Ch., and Georges Urbain, composition of thortveitite from Madagascar, A., ii, 517.

Bourcet, Paul. See Joseph-Marie-Alphonse Chevalier.

Bourgeois, L., a simple process for obtaining crystallised gypsum, A., ii, 292.

Bourguignon, Georges, and Conduché, the introduction of the iodine ion by electrolysis in a human being, and its elimination by the urine, A., i, 704.

Bourlet, Claude W., and Walter Thomas, the thermos flask in the chemical laboratory, A., ii, 139.

Bourne, W. See Raymond L. Stehle. Bournigault, A. See A. Robin.

Boussu, Roger G., limit of inflammability of the vapours of the system, alcoholpetrol, and of a triple system with a basis of alcohol and petrol, A., ii,

Boutaric, Augustin, and M. Vuillaume. flocculation of colloidal arsenic sulphide; influence of the concentration of the colloid, shaking, and temperature, **A**., ii, 498.

Boutin, A. M.See André Sanfourche. Boutot, Louis. See Paul Fleury.

Bowen, Edmund John. See Harold Brewer Hartley, and Cyril Norman Hinshelwood.

Bowen, Norman L. See George W. Morey.

Boyd, David Runciman. See Paul Jacobsen.

Bozorth, Richard M., crystal structure of potassium cyanide, A., i, 441. crystal structure of ammonium fluosilicate, A., ii, 499.

crystal structure of cadmium iodide, A., ii, 851.

Braden, Maria. See Emil Heuser.

Bradfield, Richard, centrifugal method for preparing colloidal ferrie hydroxide, aluminium hydroxide, and silicic acid, A., ii, 507.

Bradford, Samuel Clement, an explana-tion of Liesegang's rings, A., ii, 358. Bradley, Harold Cornelius, autolysis. VIII. The nature of the autolytic

enzymes, A., i, 896.
Bradshaw, Geoffrey Gordon, and Arthur George Perkin, derivatives of 2-hydroxybenzanthrone. I., T., 911.

Brady, Oscar Lisle, the nitration of m-

nitrotoluene, T., 328.

Brady, Oscar Lisle, James Nelson
Edmund Day, and William Joseph
Woodgate Rolt, the dinitrotoluidines, T., 526.

Brady, Oscar Lisle, and Gerald Patrick McHugh, the alkylhydrazones, T.,

Brady, Oscar Lisle, and Clifford Dane Thomas, the isomerism of the oximes. X. Cinnam- and nitrocinnam-aldoximes, T., 2098.

Brady, Oscar Lisle. See also Gerald

Bishop.

Braecke, (Mlle) Marie, application of Bourquelot's biochemical method to the investigation of sugars and glucosides in some of the Scrophulariaceæ, A., i, 1225.

Braecke, (Mlle) Marie. See also Marc Bridel

Bragg, (Sir) William Henry, structure of organic crystals, A., ii, 128. the crystal structure of ice, A., ii, 440.

the significance of crystal structure, T., 2766.

Bragg, William Lawrence, R. James, and C. H. Bosanquet, scattering of Röntgen rays by the atoms of a crystal, A., ii, 184.

the distribution of electrons around the nucleus in the sodium and chlorine atoms, A., ii, 703.

Braham, J. M. See J. S. Blair.

Brakeley, Elizabeth. See James Kendall. Brand, Kurt, and H. Collischonn, pyrogallol 1:3-dimethyl ether. I., A., i, 452.

Brand, Kurt, and Karl Otto Müller, the diphensuccindene series. IV. 9:12-Dichloro-△9, 11-diphensuccindadiene and diphensuccind-10-ene, A., i, 444.

Brand, Kurt, and Joseph Steiner, the catalytic reduction of aromatic nitrocompounds and a new method for the preparation of β -arylhydroxylamines. Ī., A., i, 536.

Brandsma, W. F., equilibria and reaction velocities, A., ii, 699.

Brandt, *Erich*, ionisation and excitation tension of nitrogen, A., ii, 186. Brandt, Ph. See Martin Battegay.

Brann, Martin, the action of digitalis, calcium, and barium on strips of heart muscle (Löwe) and the autagonistic influence of cocaine, magnesium,

and potassium, A., i, 1213.

Brass, Kurt, and Erwin Ferber, aminoand anilino-phenanthraquinones, A.,

i, 355.

Brass, Kurt, and Ludwig Köhler, dibenzothianthrendiquinone and naphthathiophendiquinone(conversion of the dithiin ring into the thiophen ring), A., i, 1050.

Braun, Julius von, constitution of Grig-

nard's compounds, A., i, 22.

Braun, Julius von [with K. Moldanke, H. Dirlam, and H. Gruber, benzo-polymethylene compounds. IV. The two ar-aldehydes of tetrahydronaphthalene [tetralin], A., i, 748.

Braun, Julius von, Otto Braunsdorf, and

Kurt Räth, relationships between constitution and pharmacological action in the cases of the benzoic and tropic esters of hydroxyalkylamines, A., i, 759.

Braun, Julius von, and Heinrich Gruber, benzopolymethylene compounds. V. Synthesis of a-anthrapyridine maphthazine] from tetralin [tetrahydro-

naphthalene], A., i, 762.

Braun, Julius von, Erich Hahn, and Jon Seemann, benzopolymethylene compounds. III. Dehydrogenation of tetrahydronaphthalene, hydrindene, and tetrahydroacenaphthene [tetraphthene] derivatives, A., i, 728.

Braun, Julius von, and Wilhelm Kaiser, the two isomeric phthalyl chlorides,

A., i, 658.

Braun, Julius von, and Georg Kirschbaum, catalytic hydrogenations under pressure in the presence of nickel I. Indene and acenaphthene, A., i, 727.

Braun, Julius von, and Annemarie Nelken, preparation of dihydroisoindole, A., i, 863.

Braun, Julius von, and Josef Weismantel, dealkylation of mixed secondary bases by phosphorus chloride, A., i, 1150.

Braunholtz, W. See Hermann Staudinger.

Braunholtz, Walter Theodore Karl, a comparison of three isomeric carbocyanines, T., 169.

reactions of the phosphazines, T., 300. Braunholtz, Walter Theodore Karl, and William Hobson Mills, the cyanine VI. Dyes containing a quinoline and a benzothiazole nucleus; the thioisocyanines, T., 2004.

Braunholtz, Walter Theodore Karl. See also William Hobson Mills.

Braunizer, G. See Carlo Gastaldi.

Brauns, Dirk Hendrik, crystalline chlorotetra-acetylmannose, A., i, 433. Brauns, Fritz. See Karl Freudenberg.

Braunsdorf, Karl. See Erich Schmidt. Braunsdorf, Otto. See Julius Brann.

Brazier, Sidney Albert. See Douglas Frank Twiss.

Bredig, Georg, and J. Michel, chemical kinetics of perchloric acid and its salts, A., ii, 359.

Bredt, Julius, camphene-epi-sec.-carboxylic acids [1:1-dimethyl-6-methylene-(1:2:2)dicycloheptane-3-carboxylic acid], their preparation from bornylene-epi-carboxylic acid, and their transformation into sec. - 8-hydroxycamphane-epi-carboxylic acid [2-hydroxy-3-methyl-meso-dimethyl-(1:2:2)dieycloheptanecarboxylic acid] and 5hydroxycamphane-epi-carboxylic acid [4-hydroxy-3-methyl-meso-dimethyl-(1:2:2)-di-cycloheptanecarboxylic acid] (o- and p-borneolcarboxylic acids), A., i, 937.

Breisch, K. See K. Chalupny. Brenet, (Mlle) M. T. See J. Barlot. Brenken, Bruno. See Augustin Bistr-

Brenner, Anton, the analysis of alumin-

ium alloys, A., ii, 319. Brenner, Widar, antagonistic ion effects,

A., i, 907. Breuer, Paul Karl. See Franz Feist. Brewster, Ray Q. See Jean Piccard.

Březina, Jindřich, the solution of tetramethylammonium aluminate, A., i, 638.

Bridel, Marc, the presence of a glucoside in the stems and roots of Sedum telephium, L., A., i, 799.

the presence of the glucoside of an essential oil in the leafy stems and roots of Sedum telephium, Linn., A., i, 1225.

Bridel, Marc, and (Mlle) Marie Braecke. the presence of sucrose and aucubin in the seeds of Melampyrum arvense, L., A., i, 209.

the presence of melampyritol and aucubin in the foliated stems of Melampyrum arvense., L., A., i,

rhinanthin and aucubin; rhinanthin is impure aucubin, A., i, 1168.

the presence of aucubin and sucrose in seeds of Rhinanthus crista-galli, L., A., i, 1225.

Briegleb, Karl. See Emil Fromm.

Briellmann, P. See Hans Rupe.

Briggs, A. P., a colorimetric method for the estimation of homogentisic acid in urine, A., ii, 534.

colorimetric method for the estimation of small amounts of magnesium, A., ii, 659.

modification of the Bell-Doisy phosphate method, A., ii, 718.

Briggs, A. P., and Philip Anderson Shaffer, the excretion of acetone from the lungs, A., i, 190.

Brigl, Percy, the partial replacement of the acid groups in β-penta-acetyl-

glucose, A., i, 225. carbohydrates. II. A new anhydride (αβ) of glucose, A., i, 1117.

Brigl, Percy, and Edgar Fuchs, lignoceric acid and its derivatives, A., i, 712.

Brillouin, Marcel, the Böhr atom; the Lagrange theorem applied to electronic orbits, A., ii, 438.

Brimmer, Karl. See Hugo Weil. Briner, Emil, S. Niewiazski, and J. Wiswald, oxidation of nitric oxide and the recovery of nitrogen oxides from mixtures with air, A., ii, 563.

Briner, Emil, and (Mlle) A. Trampler, the mechanism of catalytic action in the hydrolysis of fats, A., ii. 208.

Brinkley, Stuart R., equilibrium in the system ammonia-mercuric cyanide, A., i, 724.

Brinkman, R., osmotic resistance and phosphatides of the blood; quantitative methods, A., i, 1086.

Brinkman, R., and (Frl.) H. Wastl, the biochemistry of the phosphatides and IV. The importance of the proportion of cholesterol-lecithin of the erythrocyte surface for the stability of suspensions of blood-corpuscles and for natural hæmolysis, A., i, 289.

Brinkman, R. See also S. van Creveld. Brinton, Paul H. M.-P., and Charles James, rates of hydrolysis of the rare earth carbonates and the serial order of the rare earth elements, A., ii, 39.

concentration of the erbium earths, A., ii, 62.

British Dyestuffs Corporation, James Baddiley, Joseph Baron Pay-man, and Harry Wignall, preparation of o-sulphonic acids of aromatic amines,

A., i, 448.
British Dyestuffs Corporation, Ltd.,
Arthur George Green, and Stanley Joseph Green, preparation of phthalimide, A., i, 836.

British Dyestuffs Corporation, Ltd., Arthur George Green, Kenneth Herbert Saunders, and Stanley Charles Bate, preparation of new triarylmethane colouring matters, A., i, 1068.

British Dyestuffs Corporation, Ltd., Herbert Levinstein, and Georges Imbert, preparation of phenylglycine compounds, A., i, 252.

British Dyestuffs Corporation, Ltd., Arthur George Perkin, and George Douglas Spencer, preparation of benzanthrone derivatives. A., i, 941.

British Dyestuffs Corporation, See also Alexander Walker Fyfe, and

David Segaller.

British Research Association for the Woollen and Worsted Industries, the sorption of neutral scap by wool. and its bearing on scouring and milling processes, A., ii, 551.

standard method for the estimation of

soap in wool, A., ii, 594.

Britton, Edgar C. See Moses Gomberg. Britton, Hubert Thomas Stanley, the system potassium sulphate-aluminium sulphate-water at 25°, T., 982.

the system ammonium sulphateglucinum sulphate-water at 25°, T.,

2612.

the separation of aluminium from glucinum. III., A., ii, 228.

Brochet, André, the preparation of cyclohexanol, A., i, 1144.

Brodin, P., and P. Huchet, a new

antianaphylactic substance, sodium formaldehydesulphoxylate, A., i, 90. Brodin, P. See also A. Chauffard.

Brody, E., theoretical determination of the chemical constants of monatomic gases, A., ii, 191.

Brocksmit, T. C. N., zinc borate, A., ii,

Brönsted, Johannes Nicolaus, applicability of the gas laws to strong electrolytes. II., A., ii, 113.

studies on chemical affinity. Reaction affinity in systems of solid salts, A., ii, 132.

temperature dependence of the solubility, the activity and osmotic coefficients of salts, A., ii, 354.

IV. Principle of the solubility. specific interaction of ions, A., ii, 481.

calculation of the osmotic and activity functions in solutions of uni-univalent salts, A., ii, 482.

theory of the velocity of chemical reactions, A., ii, 699.

Brönsted, Johannes Nicolaus, and Georg von Hevesy, separation of the isotopes of mercury, A., ii, 149.

separation of the isotopes of chlorine, A., ii, 280.

atomic weight of mercury from different sources, A., ii, 645.

Brönsted, Johannes Nicolaus, and Agnes Petersen, solubility. III. Solubility of metal ammonia salts in salt solutions, A., ii, 199.

Brösamlen, adrenaline hyperglycæmia,

A., i, 1092.

Broglie, Louis de, the theory of absorption of X-rays by matter and the principle of correspondence, A., ii, 104.

X-rays and thermodynamic equilibrium, A., ii, 249.

Broglie, Maurice de, the corpuscular spectra of the elements, A., ii, 330.

Broglie, Maurice de, and A. Dauvillier, a new absorption phenomenon observed in the domain of X-rays, A., ii,

Bromig, Karl. See Conrad Amberger. Bronn, J., temperatures of combustion, A., ii, 548.

Brooks, Matilda Moldenhauer, the effect of hydrogen-ion concentration on the production of carbon dioxide by Bacillus butyricus and Bacillus subtilis, A., i, 201.
penetration of kations into living

cells, A., i, 308.

Brose, W. See Carl Mannich. Broughall, Laurence St. C., frequency of the electrons in the neon atom, A., ii, 213.

aspects of the neon spectrum, A., ii, 541. Brown, Adrian, obituary notice of, T., 2899.

Brown, Andrew Charles, the adsorption of uranium-X and its isotope thorium, by basic ferric acetate, T., 1736.

Brown, Anson L., a new quantitative method for the estimation of iron in the blood, A., ii, 319.

Brown, David Christie. See George Gerald Henderson.

Brown, Oliver W., S. V. Cook, and J. C. Warner, effect of grinding on the apparent density of lead oxides, A., ii, 571.

Brown, Oliver W., and C.O. Henke, catalytic preparation of aniline. I. and II., A., i, 445, 535.

catalytic activity of copper, A., ii, 833.

Brown, Oliver W. See also C. O. Henke. Brown, Ralph L. See Charles Moureu, and Julius Stieglitz.

Brown, William, preparation and use of collodion osmometers, A., 690.

Brown, W. E. L., and Archibald Vivian Hill, the physical chemistry of hæmoglobin in blood, A., i, 1199.

Browne, (Miss) Agnes. See Douglas Norman Jackson.

Browne, Arthur Wesley, and A. B. Hoel, lecture experiments with experiments with hydronitric [hydrazoic] acid and the trinitrides [azides], A., ii, 840.

reaction between potassium azide and iodine in the presence of carbon disulphide, A., ii, 847.

potassium azidodithiocarbonate, A., ii, 848.

Browne, Frederick L., and Joseph Howard Mathews, heat of coagulation of ferric oxide hydrosol with

electrolytes, A., ii, 196. Browne, Harold H. Se See Clarke E. Davis.

Browning, Carl Hamilton, JuliusBerend Cohen, R. Gaunt, and R. Gulbransen, relationships between antiseptic action and chemical constitution, with special reference to compounds of the pyridine, quinoline, acridine, and phenazine series, A., i, 612.

the antiseptic properties of cyanine dyes, A., i, 1097.

See Bernhard Neumann.

Bruchhausen, F. von. See Johannes Gadamer.

See G. Fester. Brude, G.

Bruhat, Georges, and A. Delaygue, determination of the higher point of inversion of the specific heat of the saturated vapour of benzene, A., ii, 348.

Bruin, G. de, cellulose nitrates, A., i,

Bruins, H. R. See Ernst Cohen. Brukl, A. See Ludwig Moser.

Brun, Pierre. See Marcel Godchot.

Bruni, Giuseppe, and E. Romani, mercaptothiazoles as accelerators in

vulcanisation, A., i, 755.

Brunkow, O. R., W. H. Peterson, and Edwin Broun Fred, the influence of certain factors on the chemical composition of sauerkraut, A., i, 312.

Bruylants, Pierre, the action of organomagnesium compounds on glutaronitrile, A., i, 531.

butenonitriles, A., i, 817, 924.

Bucherer, Hans Theodor, and Rudolf Wahl, 6-amino-α-naphthol-5-sulphonic acid (A-acid) and its derivatives, A., i, 247.

Bucherer, Hans Theodor, and Rudolf Wahl, the action of sulphites on aromatic amino- and hydroxy-com-IX. 6-Amino-α-naphthol-5pounds. sulphonic acid (A-acid) and the sulphite reaction, A., i, 464.

Bucherer, Hans Theodor, and Walther Zimmermann, the action of sulphites on aromatic amino- and hydroxy-compounds. X. Action of phenylhydrazine-bisulphite mixture, particularly on aminonaphtholsulphonic acids, and azo-dyes, A., i, 465.

Buchheim, Kurt. See Wilhelm Steinkopf.

Buchler, C. C. See Moses Gomberg.

Buchwaldt, Arnold. See Gustav Heller. Buck, Johannes Sybrandt, and Isidor Morris Heilbron, the reactivity of doubly-conjugated unsaturated III. Unsymmetrical ketones. hydroxy- and methoxy-derivatives, T., 1095.

benzopyrylium distyryl salts of ketones, I., T., 1198.

Buckley, Harold. See Lionel Felix Gilbert.

ickner, G. Davis, J. H. Martin, W. C. Pierce, and A. M. Peter, Buckner, calcium in egg-shell formation, A., i,

Buckner, Henry K. See George L. Clark.

Buddington, A. F., some natural and synthetic melilites, A., ii, 155.

Budnikov, P. P., and K. E. Krause, estimation of sulphides by oxidation with ferric salts, A., ii, 717, 782.

Budnikov, P. P., and E. A. Schilov, action of sulphur and sulphur compounds on terpenes, A., i, 944.

Budnikov, P. \overline{P} ., and Ja. K. Syrkin, setting and velocity of solution of burnt gypsum, A., ii, 849.

Budnikov, P. P., and P. V. Zolotarev, saccharification of cellulose, A., i, 922.

Bücher, W. See Alfred Benrath.

Buell, Harold D., new qualitative test for uranium, A., ii, 590.

Buell, Harold D., and C. R. McCrosky, preparation and study of the rarer alkali bromates; rubidium bromate, A., ii, 146.

See Heinrich Biltz. Bülow, Hans.

Bürger, Max, the action of intravenous injections of hypertonic solutions of various sugars on the respiratory meta.

bolism of the dog, A., i, 286.

Bürklin, Elisabeth. See P. Karrer.

Bull, Arthur W., and J. R. Adams, alizarin-iron lakes, A., i, 355. Bulli, Mario. See Luigi Rolla.

Bullis, D. E. See R. H. Robinson. Bulygina, Nad. See Nikolai Schilov.

Bump, Albert H. See James Bryant Conant.

Bunbury, Hugh Mills, the sorption of carbonyl chloride by beechwood charcoal, T., 1525.

Bunzl, Cornelie. See Alfons Klemenc. Burbidge, P. W., absorption of the KX-rays of silver in gases and gaseous mixtures, A., ii, 184.

Burdick, Charles Lalor, oxidation of nitric oxide and its catalysis, A., ii,

272.

analytical determination of oxides of nitrogen in gas mixtures, A., ii, 583.

Burg, J. H. N. van der, the preparation of acrylic acid and some of its de-

Burger, H. C., X-ray examination of the trioxides of tungsten, molybdenum, and their hydrates, A., ii, 508.

Burgess, Henry. See Thomas Martin Lowry.

Burkardt, Hermann, rapid method for estimating ammonia in ammonium salts, A., ii, 865.

Burnett, Arthur John.See James William McBain.

Burns, Robert. See Forsyth JamesWilson.

Burr, G. O. See Charles Shattuck Palmer.

Burrows, George Joseph, and Eustace Ebenezer Turner, the preparation of

certain ferrioxalates, A., i, 916. Burton, E. F., and E. D. MacInnes, coagulation of colloidal solutions of arsenious sulphide by electrolytes, A.,

ii, 130.

Burton, Harold, and James Kenner, the influence of nitro-groups on the reactivity of substituents in the benzene nucleus. V. Heteronucleal dinitro-derivatives, T., 489.

the influence of nitro-groups on the reactivity of substituents in the benzene nucleus. VI. The elimination of halogen during the reduction of halogenated nitro-compounds, T., 675.

Bury, Charles R., Langmuir's theory of the arrangement of electrons in atoms

and molecules, A., ii, 43.

Bury, Frank Ward, and James Riddick Partington, preparation and reactions of stannous oxide and stannous hydroxides, T., 1998.

Buryánek, Ot. See Franz Jirsa.

Busch, Hedwig. See Emil Knoevenagel. Bushill, John Herbert. See Arthur Robert Ling.

Buston, Harold W., and Samuel Barnett Schryver, method for the separation of amino-acids from the products of hydrolysis of proteins and other sources, A., i, 182.

Buswell, Arthur M. See R. E. Greenfield.

Butkewitsch, Wl., formation of oxalic acid and ammonia in cultures of Aspergillus niger on peptone, A., i, 707.

utilisation of peptone as source of carbon by Citromyces species, A., i,

formation and accumulation of oxalic acid in Citromyces cultures on salts of organic acids, A., i, 707.

ammonia as a product of protein transformation caused by mould fungi and the conditions of its formation, A., i, 973.

formation of citric and oxalic acids in Citromyces cultures on sugar and a process for the estimation of these acids, A., i, 973.

utilisation and formation of citric acid in cultures of Citromyces glaber on

sugar, A., i, 973.
Butler, E. H., decomposition of iodoform in solutions by means of radiant

energy, A., ii, 604.

Byk, Alfred, conversion of energy in photochemical processes, A., ii, 415. Bylinkin, J. S. See Alexei E. Tschit-

schibabin.

C.

Cabrera, B., magnetic properties and atomic structure, A., ii, 469.

Cabrera, B., and Santiago Piña de Rubies, variations in the magnetic susceptibility of oxychromic salts with addition of sulphuric acid, A., ii, 612.

Cady, Hamilton Perkins, Howard M. Elsey, and Emily V. Berger, solubility of helium in water, A., ii, 642.

Cain, John R., and J. Clyde Hostetter, co-precipitation of vanadic acid with ammonium phosphomolybdate, A., ii,

Cake, W. Ellwood, the catalytic hydro-

genation of dextrose, A., i, 523. Cake, W. Ellwood, and H. H. Bartlett, the carbohydrate content of the seed of Asparagus officinalis, L., A., i, 504. Cake, W. Ellwood. See also Hobart

Hurd Willard.

Calcagni, Gennaro, new hypothesis of the origin of natural fuels, A., ii, 385. Caldwell, Mary L. See Henry Clapp Sherman.

Caldwell, William E., and William Gordon Lyle, blood chemistry in normal and abnormal pregnancy, A., i, 489.

Cale, F. M.See John Cunningham

McLennan.

Calingaert, G., a homologue of ethylene sulphide; trimethylethylene methyl-Δβ-butylene] sulphide, A., i, 421.

Callan, Thomas, and James Alexander Russell Henderson, estimation of the nitro-group in aromatic organic compounds. II., A., ii, 524. Callow, E. H. See Arthur Robert Ling.

Callsen, J., ethyl bromodiethylacetyl-

allophanate, A., i, 1128.

Camacho, Francisco. See Max Berg-

Cameron, Alexander Thomas, and M. S. Hollenberg, the relative toxicity of the haloids and other anions, A., i, 499.

Cameron, Don H. See Harry N. Holmes.

Cammidge, P. J., J. A. C. Forsyth, and H. A. Howard, normal sugar content of the blood, A., i, 81.

Campbell, Arthur Fred, the speed of sulphonation of phenols. I. The effect of temperature and the methyl group, T., 847.

Campbell, Colin, the propagation of explosion waves in gases contained in tubes of varying cross-section, T., 2483.

Campbell, H. L. See Victor K. LaMer, and Henry Clapp Sherman.

Campbell, James Argyll, and Thomas Arthur Webster, day and night urine during complete rest, laboratory routine, light muscular work, and oxygen administration, A., i, 197.

effect of severe muscular work on the composition of the urine, A., i, 495.

Canals, E., effect of different kinds of solar radiation on the formation of essential oils in plants, A., i, 907. saccharase, A., i, 1075.

the inversion of sucrose in the alkaline copper solution, A., ii, 592.

Canals, E. See also A. Astruc.

Cannan, Robert Keith. See Jack Cecil Drummond.

Canneri, G., chromates of thallium, A., ii, 297.

allium bismutho-, stibio-, an arseno-thiosulphates, A., ii, 378. thallium

Canneri, G., and R. Morelli, thermal analysis of the system Tl₂O-B₂O₃, A., ii, 571.

Canneri, G., and G. Perina, haloids of bismuth and thallium, A., ii, 512.

Cant, H. See James Riddick Partington.

Capps, Julian H., estimation of metallic aluminium and aluminium oxide in commercial metal, A., ii, 319.

Cario, G., and J. Franck, the decomposition of hydrogen molecules by excited mercury atoms; A., ii, 809.

Carl, H., examination of the compression equation of liquids by means of the data of Amagat and Bridgman, A., ii, 477.

Carletti, Ottorino, the Kastle-Meyer reagent as a very sensitive reagent for copper, A., ii, 787.

Carlton, C. A., symmetrical diphenylguanidine as a standard in acidimetry and alkalimetry, A., ii, 654.

Carmichael, (Miss) Mabel, electrosynthesis of azelaic and thapsic acids, Ť., 2545.

Carnot, Paul, and Marc Tiffeneau, a new hypnotic of the barbituric acid series; ethylbutylbarbituric acid, A., i, 900.

Carothers, W. A. See Charles Shattuck Palmer.

Carozzi, Enrico. See Luigi Losana.

Carpenter, Henry Cort Harold, and Constance F. Elam, production of single crystals of aluminium and their tensile properties, A., ii, 69.

Carpentier, Georges. See Pierre Thomas. Carr, R. H., measuring soil toxicity, acidity, and basicity, A., ii, 172.

Carr, R. H. See also M. F. Showalter. Carra, J., comparison of methods for the estimation of urea, A., ii, 668.

Carrara, Gino. See Angelo Angeli. Carré, Marjory Harriotte, changes which occur in the pectic constituents of

stored fruit, A., i, 1222.

Carré, Marjory Harriotte, and Dorothy Haynes, the estimation of pectin as calcium pectate and the application of this method to the estimation of the soluble pectin in apples, A., ii, 401.

Carrez, C., clarification of urines by zinc ferrocyanide, A., ii, 233.

Carrick, L. L., solubilities and cooling curves of the mononitrophenols, A., i, 334.

Carrière, E., the aldehyde acids of the succinic series, A., i, 318.

Carruthers, Albert, and Edmund Langley Hirst, methylation of xylose, T., 2299. Carter, Edna, the vacuum-spark spectra

of the metals, A., ii, 599. Carter, E. G. See Joseph E. Greaves. Cartoceti, A. See G. Sirovich.

Carus, M., improved method for the separation of iron and manganese, A., ii, 88.

Casale, Luigi, absorbent power of soils, and the absorption by plants of nutritive substances from the soil, A., i, 508.

Case, Francis H. See Treat Baldwin Johnson.

Cashmore, Albert Eric, Hamilton Mc-Combie, and Harold Archibald Scarborough, the velocity of reaction in mixed solvents. II. The velocity of saponification of the ethyl esters of some monosubstituted benzoic acids, T., 243.

Cassel, H., vapour pressures of binary

mixtures, A., ii., 424. relationship of Dolezalek's theory of solutions to that of Planck, A., ii, 481.

Cassella & Co., Leopold, preparation of a new acridine compound, A., i, 276.

preparation of compounds of pyridinebetaine with metallic salts, A., i,

preparation of 1-amino-2-anthraquinone aldehyde, A., i, 942.

Casseus, H. See Emil Heuser.

Castellani, Aldo, and Frank E. Taylor, identification of inulin by a mycological method, A., ii, 879.

Catalan, Miguel A., series and other regularities in the spectrum of man-

ganese, A., ii, 726.

Cate, J. Ten, action of potassium, calcium, and magnesium ions on the sympathetic nerve of the heart, A., i. 296.

Catheart, P. H., a simple hydrogen generator for use in making hydrogenion determinations, A., ii, 440.

Catoire, M. See G. Malfitano.

Cavazzani, Emile, crystallisation and proteins, A., ii, 745.

Robert Martin, qualities of Caven,

valency, A., ii, 279.

Caven, Robert Martin, and John Ferguson, the dissociation pressures of hydrated double sulphates. I. Hyhydrated double sulphates. drated cupric alkali sulphates, T., 1406.

Chadwick, James, and E. S. Bieler, collisions of a-particles with hydrogen

nuclei, A., ii, 12.

Chadwick, James, and C. D. Ellis, the intensity distribution in the \$\beta\$-ray spectra of radium-B and -C, A., ii,

Chadwick, James. See also (Sir) Ernest Rutherford.

Challenger, Frederick, and Leslie Randal Ridgway, organo-derivatives of bismuth. VI. The preparation and properties of tertiary aromatic bismuthines and their interaction with organic and inorganic halogen compounds, T., 104.

Challenger, Frederick, and John Frederick Wilkinson, organo-derivatives of bismuth. V. The stability of halogen, cyano- and thiocyano-derivatives of tertiary aromatic bismuthines, T.,

Chalupny, K., and K. Breisch, estimation of magnesium in technical nickel, A., ii, 227.

separation of aluminium from iron by means of o-phenetidine, A., ii, 588.

Chandrasena, Juan Pedige Charles, and Christopher Kelk Ingold, the conditions underlying the formation of unsaturated and cyclic compounds from halogenated open-chain derivatives. IV. Products formed from halogen derivatives of muconic acid; the constitution of muconic acid, T., 1306.

effect of attached groups on the ease of formation of the cyclopentane

ring, T., 1552.

Juan Pedige Charles, Chandrasena, Christopher Kelk Ingold, and Jocelyn Field Thorpe, the chemistry of polycyclic structures in relation to their homocyclic unsaturated isomerides. III. Intra-annular tautomerism of acampholytic acid, T., 1542.

Chandratreya, V. L. See Howard

James Winch.

Chantraine, H., the blood-sugar in narcosis and diseases of the nervous system, A., i, 192.

Chanutin, Alfred, animal calorimetry. XX. The influence of the ingestion of meat and of glycine and alanine on the carbon dioxide-combining power of blood plasma, A., i, 288.

Chapas, solubility of the isomeric toluic acids in the three xylenes, A., i, 339.

Chapman, Alfred Chaston, examination of foods for the presence of sulphites, A., ii, 520.

Chapman, Arthur William, imino-aryl I. N-Phenylbenzimino-methers. hydroxyphenyl ether and the synthesis of 2:4-dihydroxybenzophenone, T., 1676.

Charitschkov, K., Winkelblech's phenomenon or pseudo-extraction and its importance in colloidal chemistry; new methods of extracting solids, A., ii, 826.

Charitschkov, K., general method for obtaining gels of inorganic salts, and its relation to theories of the colloidal state, A., ii, 827. Charlton, Thomas J. See Howard W.

Haggard.

Charpy, Georges, and Louis Grenet, the penetration of tempering in steel, A., ii, 507.

Charrier, G., p-nitrophenylstibinic acid,

A., i, 1080.

- Charrier, G. [with C. Sala, S. Viola, G. Crippa, C. Cortassa, L. Demichelis, and M. Speirani], aminoazo-, hydroxyazo-, and hydrazo-compounds, A., i, 769.
- Charrier, G., and A. Beretta, aziminobenzene (1:2:3-benztriazole), A., i,
- Charriou, A., the carrying down of calcium oxide by precipitates of ferric oxide, A., ii, 163. the separation of the oxides of iron
 - and aluminium from admixture with calcium oxide by the nitrate method, A., ii, 319.
 - the separation of ferric oxide and aluminium oxide from magnesium oxide by the nitrate method, A., ii,
- Chattaway, Frederick Daniel, and Hinton John Harris, the oxidation of sucrose by nitric acid, T., 2703.
- Chattaway, Frederick Daniel, and Henry Rowland Hill, the interaction of diazonium salts and phenols, T., 2756.
- Chattaway, Frederick Daniel, and Deric William Parkes, isomeric citraconyl hydrazides, T., 283.
- Chatteriee, Bibhu Charan. See Rasik $\it Lal$ Datta.
- Chatterjee, Kshetra Pada, estimation of sulphate-ion as barium sulphate. I., A., ii, 390.
- Chatterji, Nitya Gopal, and Nilratan Dhar, peptisation and precipitation, A., ii, 205.
 - Liesegang's phenomenon and precipitate formation, A., ii, 627.
- Chaudron, Georges, and G. Juge-Boirard, the estimation of sulphur in iron
- pyrites, A., ii, 311. Chaudun, (Mlle) Andrée, the inversion
- of sucrose by saccharase, A., i, 389. Chaudun, (Mlle) Andrée. See also H.
- Chauffard, A., P. Brodin, and A. Grigaut, uric acid content of blood
- corpuscles, A., i, 1086. Chavanne, Georges, and Paul Becker, dimethylcyclohexanes, A., i, 442.

- Chavanne, Georges, and B. Lejeune, a trimethylisopropylheptane; methane [$\beta\beta\gamma$ -trimethylbutane], A., i,
- Chavanne, Georges, and (Mlle) Hortense van Risseghem, the viscosities of some hydrocarbons, A., ii, 352.
- Chazan, Sydney. See Gilbert Thomas Morgan.
- Cheetham, H. C. See W. Lee Lewis. Chemin, E., corrosive action of roots on marble, **A.,** i, 94.
- Chemische Fabrik auf Aktien vorm. E. Schering, preparation of a new diethylbarbituric acid compound, A., i, 582.
 - preparation of camphene hydrochloride, A., i, 943.
 - preparation of 2-ar-tetrahydronaphthylquinoline-4-carboxylic acids, A., i, 952.
- Chemische Fabrik Flora, preparation of sodium silver-thioglycollate, A., i, 425.
- Chemische Fabrik Griesheim-Elektron, hydrogenation of unsaturated hydrocarbons, A., i, 977.
- Chemische Fabrik Worms Akt.-Ges., preparation of anthraquinone and its derivatives, A., i, 559.
- Chen, Yü Gwan. See Marston Taylor Bogert.
- Chéneveau, Charles, an optical method for the determination of the reciprocal solubility of slightly miscible liquids, A., ii, 355, 427.
- Cherbuliez, Emile, and Emanuel Feer, formaldehyde derivatives of diketopiperazine, A., i, 1065.
- Cherbuliez, Emile, and K. N. Stavritch. new syntheses of pyrimidines, A., i, 581.
- Chernoff, Lewis H. See Carl Oscar Johns. Chervet, D. See W. D. Treadwell.
- Victor K. Chesnut, See Frederick Belding Power.
- Chevalier, Joseph-Marie-Alphonse, and Paut Bourcet, preparation of ethylene by reduction of acetylene, A., i, 801.
- Chevenard, P., expansion of chromium and of nickel-chromium alloys over a wide range of temperatures, A., ii, 153. Chiba, Chozo. See Riko Majima.
- Chibnall, Albert Charles, nitrogenous metabolism of the higher plants. II. The distribution of nitrogen in the leaves of the runner bean, A., i,
 - nitrogenous metabolism of the higher III. The effect of lowplants. temperature drying on the tribution of nitrogen in the leaves of the runner bean, A., i, 1225.

- Chibnall, Albert Charles, nitrogenous metabolism of the higher plants. IV. Distribution of nitrogen in the dead leaves of the runner bean, A.,
- Chikashige, Masuri, Honda's conception of the A1 transformation and the quenching of steels, A., ii, 852.

Child, C. D., a continuous spectrum

from mercury vapour, A., ii, 676. Chiles, Howard M., and William Albert Noyes, optically active diazo-compounds. II., A., i, 924.
Chirvinskii, P., olivine from lithosiderites, A., ii, 714.
Chiu, C. Y. See Charles August Kraus.
Chmelař, J. See Julius Stoklasa.

Chon, Sung-Sheng. See Hermann Steudel.

Chouchak, D., colorimetric estimation of arsenic by means of quinine molybdate, A., ii, 526.

Choudhury, Kumud Nath. See Haridas Saha.

Chouke, K. S. See Edward A. Doisy. Christiansen, J. A., a reaction between methyl alcohol and water and some related reactions, A., i, 3.

Christiansen, Walter G., the relation between the mode of synthesis and toxicity of arsphenamine [salvarsan] and related compounds, A., i, 186.

the sulphur content of arsphenamine (salvarsan) and its relation to the mode of synthesis and toxicity. II., and III., A., i, 601, 1202.

Christie, George Hallatt, and James Kenner, the molecular configurations of polynuclear aromatic compounds. I. The resolution of γ -6:6'-dinitro- and 4:6:4':6'-tetranitro-diphenic acids into optically active components, T., 614. Christin, P. See Paul Wenger.

Churchill, H. V., estimation of metallic aluminium and aluminium oxide in

commercial metal, A., ii, 319. Chwolson, O., structure of the atomic

nucleus, A., ii, 209. Ciaccio, C., [estimation of] aminonitrogen in the urine by the formol method, A., i, 88.

Ciamician, Giacomo Luigi, and A. Galizzi, behaviour of certain organic compounds in plants. XIV., A., i, 503.

Ciamician, Giacomo Luigi, and Ciro Ravenna, biological signification of

alkaloids in plants, A., i, 797. Cioffi, P. P., and L. S. Taylor, method of maintaining small objects at any temperature between -180° and $+20^{\circ}$ A., ii, 817.

Ciusa, Riccardo, "graphites" from pyrrole and from thiophen, A., i, 1057.

Doebner's reaction. IV., A., 1062.

Ciusa, Riccardo, and M. Croce, some constituents of lignites. II., A., ii,

Ciusa, Riccardo, and G. Rastelli, certain salts with para-, ortho-, and metaquinonoid structure. III. and IV., A., i, 1073.

Ciusa, Riceardo, and Luigi Vecchiotti, basic properties of the hydrazones. II., A., i, 474.

Ciusa, Riccardo, and R. Vois, fossil wax of Monte Falò, A., ii, 386.

RichardClaasen, Walter.See Anschütz.

Clarens, J., catalysts and chemical equilibrium, A., ii, 436.

Clark, A. H. See Lewis E. Warren.

Clark, A. J., mode of action of potassium on isolated organs, A., i, 399.

Clark, A. W., and R. F. Keeler, a modified method for the estimation of phosphoric acid, A., ii, 84.

Clark, Earl P., an improved method for preparing raffinose, **A.,** i, 323.

preparation of mannose, A., i, 433. Clark, George L., the properties of elements and salts as related to the dimensions of atoms and ions, A., ii, 634.

Clark, George L., and Henry K. Buckner, properties of subsidiary valency groups. III. The preparation, properties, and molecular volume relationships of the hydrates and ammines of cobalt fluoride, bromide, iodide, nitrate, carbonate, and citrate, A., ii, 300.

Clark, George L., and William Duane, a new method of using X-rays in crystal analysis, A., ii, 483.

Clark, George L., and William A. Mann, adsorption in solution and at interfaces of sugars, dextrin, starch, gum arabic, and egg-albumin, and the mechanism of their action as emulsifying agents, A., ii, 550.
Clark, Guy W., micro-estimation of

calcium in whole blood, plasma, and serum by direct precipitation, A., ii, 227.

Clark, Guy W. See also Carl L. A. Schmidt.

Clark, Norman A., rate of formation and the yield of yeast in wort, A., i, 501.

Clark, R. H., velocity of hydrolysis of sucrose, A., ii, 135.

Clark, S. M. See De Witt Neighbors. Clark, Walter.See Sidney OwenRawling.

Clark, William Mansfield, instability of phthalate potentials, A., ii, 468.

Clarke, Rosalind. See Thomas Dillon.

Classen, W. See A. Fischer.

Claude, Georges, the elimination of the heat of reaction in the synthesis of ammonia by high pressures, A., ii,

Claudin, J. See Martin Battegay. Clausen, S. W., estimation of small amounts of lactic acid, A., ii, 593.

Clavera, Josè María, melting point of commercial terpin, A., i, 1042.

Clawson, A. B. See C. Dwight Marsh. DonaldHerbertFrank,Clayson, Frederick Walter Norris, and Samuel Barnett Schryver, pectic substances of plants. II. Preliminary investigation of the chemistry of the cell-walls of plants, A., i, 206.

Clayton, Herbert. See William Davies, and Nevil Vincent Sidgwick.

Clément and Rivière, attempts at a synthetic manufacture of mother-ofpearl by production of chemical tracery, A., ii, 500.

Clemo, George Roger, and William Henry Perkin, jun., introduction of the chloroethyl group into phenols, alcohols, and amino-compounds, T., 642.

Clendinnen, Frederick William Jeffrey, mixed crystal formation in ternary systems containing water, ammonium chloride, and ferrous, cobaltous, or

nickel chloride, T., 801. Clerici, Enrico, heavy liquids for the separation of minerals, A., ii, 578.

Clews, Francis Herbert, and Hugh Vernon Thompson, the interaction of sodium chloride and silica, T., 1442.

Clifford, Percy Herbert, and Robert George "oxycellulose": its form-Fargher, ation and reactions, A., i, 1121.

Clifford, Winifred Mary, the distribution of carnosine in the animal kingdom, A., i, 398.

the effect of cold storage on the carnosine content of muscle, A., i, 791.

Clogne, René, mercury or water ureometer for the estimation of urea in urine or in blood, A., ii, 237.

See also Paul Couinaud. Clogne, René. Clover, Alphonso Morton, the autoxidation of ethyl ether, A., i, 619.

Clutterbuck, Percival Walter, and Julius Berend Cohen, the aliphatic sulphonamides. I., T., 120.

Cobet, Rudolf, and V. van der Reis, influence of arsenious acid on bacterial growth, A., i, 611.

Cocconi, G. See Efisio Mameli. Cocks, L. V., and Arthur Henry Salway, a method for the estimation of trimethylene glycol in crude glycerol, A., ii, 232.

Coffey, Samuel, the mechanism of the oxidation of drving oils as elucidated by a study of the true oxygen absorption. III. The action of driers, T., 17.

the reaction between sulphur monochloride and aniline, A., i, 132.

Cohen, Abraham, xylenol-blue and its proposed use as a new and improved indicator in chemical and biochemical work, A., ii, 387.

use of mixed indicators, A., ii, 780.

Cohen, Clara. See Carl Neuberg. Cohen, Ernst, and H. R. Bruins, use of the Zeiss water interferometer (Rayleigh-Löwe) for the analysis of non-

aqueous solutions, A., ii. 77. Cohen, Ernst, and A. L. Th. Moesveld, determination of the specific heat of solid substances by the adiabatic electrical method, A., ii, 347.

Cohen, Julius Berend. See Carl Hamilton Browning, Percival Walter Clut-Victor Froelicher, terbuck, Richard Scott, Akira Shimomura, and Edward Johnson Wayne.

Cohn, Edwin Joseph, the physical chemistry of the proteins. I. The solubility of certain proteins at their isoelectric points, A., i, 882.

Cohn, Robert, a solid water-soluble formaldehyde preparation, 918.

Colby, Walter F., and Charles F. Meyer, the absorption spectrum of hydrogen chloride, A., ii, 5.

Colby, Walter F. See also H. M. Randall.

Cole, Harriet Isabelle. See George Shannon Forbes.

Cole, Howard Irving, the dissociation of hexaphenylethane from the point of view of the octet theory of valence, A., ii, 438.

Cole, R. M., thymol from nitrocymene, A., i, 31.

Coleman, George H., and William Albert Noyes, chlorination and the formation of chloroamines by means of nitrogen trichloride, A., i, 133.

Colin, H., and (Mlle) Andrée Chaudun, the law of action of saccharase; velocity of hydrolysis and reaction of the medium, A., i, 389.

- Colledge, W. C., extraction and characterisation of alkaloids, A., ii, 327. extraction of alkaloids from viscera, A., ii, 327.
- Collenberg, Oscar Olsson, the determination of the state of valency of lower compounds by means of ammoniacal silver solutions, A., ii, 495.

the valency of tungsten and molybdenum in their complex octacyanides, A., ii, 508.

Collenberg, Oscar Olsson, and Sven Bodforss, kinetics of reactions in heterogeneous solutions; the reduction and oxidation actions of alternating currents, A., ii, 431.

Collet, (Mile) Paule, thin films of binary mixtures (glycerides), A., ii, 477.

Collie, John Norman, and (Miss) Amy Ada Beatrice Reilly, diacetylacetone, T., 1984.

Collins, George Ernest, some physical properties of cotton cellulose and its modifications; a summary of existing data, A., i, 1120.

Collins, George Ernest, and John Kerfoot Wood, the amphoteric character of stannic hydroxide and its bearing on the isomerism of the stannic acids, T., 441.

the behaviour of the stannic acids towards hydrochloric acid, T., 1122. the behaviour of the stannic acids

towards solutions of alkaline hydroxides, T., 2760.

Collins, Hawksworth, relative volumes of the chemical elements, A., ii, 28. a new physico-chemical law, A., ii, 685.

Collins, Sydney Hoare, estimation of lævulose (fructose) in straw, A., ii,

Colling, J. B., the respiratory processes in Mya arenaria and other marine mollusca, A., i, 286. Collischonn, H. See Kurt Brand.

Comber, Norman M., the flocculation of soils. II., A., i, 212.

relation of the hydrogen-ion concentration of the soil to plant distribution, A., i, 416.

Combes, Raoul, the detection of the pseudo-bases of anthocyanidins in plant-tissues, A., i, 206. the formation of anthocyanin pig-

ments, A., i, 412.

Combes, Raoul, and (Mlle) Denise
Kohler, what becomes of carbohyand (Mlle) Denise drates when the leaves of trees die?

A., i, 1222. Comella, G. See E. Oliveri-Mandalà.

Compton, Arthur, blood-enzymes. Occurrence of maltase in mammalian blood, A., i, 392.

blood enzymes. II. The influence of temperature on the action of the maltase of dog's serum, A., i, 1087.

Compton, Karl T., tungsten furnace for experiments on dissociation and ionisation, A., ii, 822.

Conant, James Bryant, additive reactions of the carbonyl group involving the increase in valency of a single atom, A., i, 41.

Conant, James Bryant, Albert H. Bump, and Harold S. Holt, additive reactions of phosphorus haloids. III. The reaction with distyryl ketone and phenyl cinnamylidenemethyl ketone, A., i, 67.

Conant, James Bryant, H. M. Kahn, L. F. Fieser, and S. S. Kurtz, jun., an electrochemical study of the reversible reduction of organic compounds, A., ii, 547.

Conant, James Bryant, Alexander D. MacDonald, and A. McB. Kinney, additive reactions of phosphorus haloids. IV. The action of the trichloride on saturated aldehydes and ketones, A., i, 186.

Conant, James Bryant, and S. M. Pollack, additive reactions of phosphorus haloids. II. The 1:4-addition of phosphenyl chloride, A., i, 67.

Conant, James Bryant. See also Theodore William Richards.

Condelli, S., enantiomorphism of matter, Pasteur's theory, and life, A., i, 410.

Conduché. See Georges Bourguignon. Congdon, Leon A., and Harry R. Ingersoll, the influence of dextrose on the dialysis of sucrose through a parchment membrane; the possibility of the separation of dextrose from sucrose by dialysis, A., i, 322.

Congdon, Leon A., and Charles R. Stewart, test for sucrose in the presence of dextrose, A., ii, 233.

Conner, Samuel D., and O. H. Sears, aluminium salts and acids at varying hydrogen-ion concentrations, in relation to plant growth in water cultures, A., i, 613.

Conover, Courtney, and Harry Drake Gibbs, preparation of phthalic anhydride by the catalysis of the vapour phase reaction between naphthalene and atmospheric air, A., i, 454.

Conrad, Eva. See Hermann Leuchs. Consortium für Elektrochemische Industrie, preparation of chlorinated acetyl chlorides, A., i, 315. Consortium für Elektrochemische Industrie, preparation of crotonaldehyde, A., i, 1115.

Constabel, Fr., the creatine content of the human heart muscle in various illnesses, A., i, 296.

Conway, Ruth E., and Florence V. Stephen, the reaction of blood, A., i, 892.

Cook, Charles W., a new occurrence of ilsemannite, A., ii, 576.

Cook, James Wilfred. See Edward de Barry Barnett.

Cook, Leon W., a simpler method of determining acetyl values, A., ii,

Cook, S. V. See Oliver W. Brown. Cooke, Martha C. See Olin Freeman

Tower.

Coope, R., sugar of cerebrospinal fluid, A., i, 295.

Cooper, Evelyn Ashley, and Hilda Walker, nature of the reducing substance in human blood, A., i, 1084.

Cooper, Evelyn Ashley. See also Gilbert Thomas Morgan.

Cooper, P. A., the X-ray structure of

potassium cyanide, A., i, 1128. Coops, J., jun. See P. E. Verkade. Cope, F. F. See Cecil E. Boord.

Copisarow, Maurice, theory of allotropy,

A., ii, 137. Coppetti, Victor, estimation of sulphur-

ous acid, A., ii, 80. Corelli, R. M., preparation and constitution of a double potassium

ammonium orthophosphate, A., ii, 287.

Cori, Karl, the action of intravenous injections of dextrose and gum arabic solution on diuresis, A., i, 1091. Corleis, Wilhelm. See Kurt Hess.

Corman, H. E. See Maitland Crease Boswell.

Cornog, Jacob, simple method for the preparation of sodium hydroxide free from carbon dioxide, A., ii, 288.

Corral, José Maria de, influence of temperature on the reaction of the

blood, A., i, 79. Corran, J. W., and William Cudmore McCullagh Lewis, effect of sucrose on the activities of the chloride- and hydrogen-ions, A., ii, 691. Correns, Erich. See Ernst Beckmann.

Cortassa, C. See G. Charrier. Costantin, J., physiology of anthocyanin and chemistry of chlorophyll, A., i, 162.

Costantino, A., the amino-acid content of plasma and corpuscles according to Bang, A., i, 81.

Costa-Vet, E. Mendes da, quantitative analysis of aluminium alloys, especially of duralumin, A., ii, 528.

Coster, Dirk, systematics of Röntgen spectra, A., ii, 180.

the L-series of the X-ray spectrum, A., ii, 244.

the L-series of the elements barium to rubidium, A., ii, 462.

spectra of X-rays and the theory of atomic structure, A., ii, 491, 677.

Costy, P. See A. Goris.

Couch, James F. See C. Dwight Marsh. Couinaud, Paul, and René Clogne, blood chemistry in puerperal infection,

A., i, 401. Coulson, William. See Aquila Forster. Cournot, Jean. See Léon Guillet.

Cousen, A., and William Stephen Turner, production of colourless glass in tank furnaces with particular reference to the use of I., A., ii, 708. selenium.

Couture, John R. See Lemuel Charles

Raiford.

Cow, Douglas V., and Walter Ernest Dixon, [physiological] action of dimethyl telluride dihaloids, A., i, 402.

Coward, Hubert Frank, and Gladys Mary Wigley, the detection and estimation of acidity and alkalinity in cotton fabrics, A., ii, 531.

Coward, Katharine Hope. See Henry Luster Jameson.

Cowlishaw, Geoffrey E. See G. F. Pickering.

Cox, Henry L. See Ben H. Nicolet.

Coysh, Reginald Henry. See Francis Ernest Francis.

Crabtree, Herbert Grace, and Robert Robinson, a synthesis of isobrazilein and certain related anhydropyranol salts. II. Synthesis of isohæmatein, T., 1033.

Craig, Wallace A. See John F. G. Hicks.

Crane, Marian M., effect of hydrogenion concentration on the toxicity of alkaloids for Paramæcium, A., i, 404.

Cranston, John Arnold, and Robert **Hutton**, the adsorption of radium-B and radium-C by ferric hydroxide, T., 2843.

See WilliamCraven, E. C. Ormandy.

Crawford, A. See Leonard A. Sayce. Crawford, Archibald Barclay.
Forsyth James Wilson.

Crehore, Albert C., atoms and molecules. II., A., ii, 438.

the hydrogen molecule. III., A., ii, 494.

Creighton, Henry Jermain Maude, a method for making methyl-violet, **A**., i, 473.

electrolytic concentration of aqueous

solutions of nitric acid. I., A., ii, 212.

method of calculating fluidity, surface tension, and reaction (equilibrium)

pressure, A., ii, 426.

Cremer, C. J. See I. M. Kolthoff.

Crespi, M. See Enrique Moles.

WaltherHildebrandt, Creutzfeldt, cathodic deposits from mixed solutions of two simple metallic salts, A., ii, 347.

Creveld, S. van, the distribution of chlorine in the blood, A., i, 287.

Creveld, S. van, and R. Brinkman, a direct demonstration of the impermeability of the corpuscles of man and of the rabbit for dextrose, A., i, 192.

Creveld, S. van. See also J. de Haan. Crippa, G. See G. Charrier.

Cristol, Paul, zinc and cancer, A., i, 497.

the estimation of the total non-protein nitrogen of serum; comparative study of trichloroacetic and metaphosphoric acids as protein precipitants, A., ii, 583.

Cristol, Paul, and M. Simonnet, estimation of the total non-proteinic nitrogen of serum; choice of a suitable albumin precipitant, A., ii, 887.

Critchett, O. A., estimation of bismuth, A., ii, 90.

Croce, M. See Riccardo Ciusa.

Crocker, Ernest C., application of the octet theory to single ring aromatic compounds, A., i, 927.

Crommelin, Claude Auguste. See Emile Mathias.

Crozier, William John, cell penetration by acids. V. The estimation of permeability changes, A., i, 897. cell penetration by acids. VI. The

chloroacetic acids, A., i, 1090.

Crut, G. See Ernst Berger. Csányi, Wilhelm. See Richard Willstätter.

Csonka, Frank A., and Grace C. Taggart, trustworthiness of the Benedict and Folin-Wu blood-sugar estimations, A., ii, 879.

Cullen, Glenn E., modification of the Clark hydrogen electrode vessel to permit accurate temperature con-

trol, A., ii, 611. acidosis. XIX. Colorimetric estimation of the hydrogen-ion concentration of blood plasma, A., ii, 672.

Cullen, Glenn E., and A. Baird Hastings, comparison of colorimetric and electrometric estimations of hydrogen-ion concentrations in solutions containing

carbon dioxide, A., ii, 657.
Cullen, Glenn E. See also Joshua Harold Austin, John P. Peters, and Donald

D. van Slyke.

Cumming, William Murdoch, the hydroferrocyanides and hydroferricyanides of the organic bases. I., T., 1287. the estimation of apparatus for methoxyl groups, A., ii, 232.

Curie, (Mile) Irène, determination of the velocity of the a-rays of polonium,

A., ii, 606.

Curie, Maurice, action of red and infrared rays on the phosphorescent sulphides, A., ii, 246.

the refractive indices of phosphorescent

sulphides, A., ii, 801.

Currey, Geoffrey Saunders, the colouring matter of the scarlet pelargonium, T., 319.

the colouring matter of red roses, A., i, 413.

Curtis, W. E., structure of the band spectrum of helium, A., ii, 330.

Curtius, Theodor, and Gustav Ehrhart, decomposition of benzyl azide in indifferent media and in malonic ester, A., i, 775.

Curtius, Theodor, and Friedrich Schmidt. the action of sulphuryl azide on

p-xylene, A., i, 776.

Curtius, Theodor, and Wilhelm Sieber, transformation of alkylated malonic acids into a-amino-acids. II. Syntheses of β -phenyl- α -alanine and of α amino-n-butyric acid, A., i, 721.

Cusmano, Guido, catalytic reduction of

nitrones, A., i, 143.

Cutter, John Outram. See Thomas Martin Lowry.

Vittorio, decomposition of Cuttica, potassium ferricyanide by the action of heat, A., i, 441.

complex nitrites of nickel, A., ii, 448.

Cuttica, Vittorio, and A. Paciello, thallous nitrite in certain complex and double nitrites, A., ii, 377.

Cwacha, J. See Julius Stoklasa.

Czochralski, J., the solubility of gases in aluminium, A., ii, 646.

D.

Daeves, Karl, solubility limits of carbon I. The system in ternary steels. chromium-iron-carbon, A., ii, 70.

Daeves, Karl, solubility limits of carbon in ternary steels. II. The system tungsten-iron-carbon, A., ii, 70.

Dafert, Otto von, the effect of daylight on the content of active material in Digitalis, A., i, 97.

Daimer, J. See T. Merl.

Daimer. Josef. See Roland Scholl.

Dains, Frank Burnett, Ruth Thompson, and William F. Asendorf, the reactions of the formamidines. X. The thioimidazolones [thiolglyoxalones], A., i, 1185.

Dakin, Henry Drysdale, synthesis of inactive para- and anti-hydroxyaspartic acids (aminomalic acids) [aminohydroxysuccinic acids], A., i,

143.

resolution of hydroxyaspartic acids [aminohydroxysuccinic acids] into optically active forms, A., i, 430.

action of muscle tissue on fumaric, maleic, glutaconic, and malic acids, A., i, 792.

Dale, Henry Hallett, and Harold Ward Dudley, the pituitary active principles and histamine, A., i, 397.

physiological action of N-methylhistamine and of tetrahydropyrido-3:4-iminazole ("iminazoleisopiperidin" of Fränkel) [1:3:5-benztriazole], A., i, 403.

Dalmer, O. See Carl Neuberg.

Damade, R, examination of the duodenal fluid obtained through a tube, A., ii, 887.

Damiens, A., the absorption of ethylene by sulphuric acid; preparation of ethyl alcohol, diethyl sulphate, and liquid hydrocarbons, A., i, 1105.

bromine normally present in animal

tissues, A., ii, 79. the "dynamic" allotropy of tellurium, A., ii, 498.

the crystallisation of amorphous tel-

lurium, A., ii, 562. Damon, Samuel R., bacteria as a source of the water-soluble B-vitamin, A., i, 201.

Danilof, Hildegard. See Gustav Reddelien.

D'Arbela, F., detection of lactic acid in organic liquids. A., ii, 460.

Dardel, Jean Henri. See Friedrich Kehrmann.

Dardord, R., the reflection of X-rays by crystals, A., ii, 673.

Darmois, Eugène, two new ammonium molybdomalates, A., i, 220.

action of acids on ammonium molybdomalate, A., i, 522.

Darwin, Charles Galton, reflection of X-rays from imperfect crystals, A., ii, 416.

Das. Radhakishen. See (Sir) Prafulla Chandra Rây.

Wilfred Marsden. See Nevil Vincent Sidgwick.

Datta, Rasik Lal, and Bibhu Charan Chatterjee, halogenation. Some derivatives of carbamic esters; chlorine as a simultaneous oxidising and condensing agent, A., i, 815.

Datta, Snehamoy, the spectrum of glucinum fluoride, A., ii, 411.

the absorption spectrum of potassium

vapour, A., ii, 678.

Daudel, Victor, spontaneous condensation of ethoxyacetone; formation of the corresponding aldol, as diethoxyβ methylpentan-β-ol-δ-one, A., i, 432.

Dauvillier, A., analysis of the atomic

structure, A., ii, 43.

the structure of the elements of mean atomic number, A., ii, 101.

the complexity of the K-series of the light elements and its theoretical interpretation, A., ii, 243.

the L-series of lutecium and ytterbium and the identification of celtium with the element of atomic number 72, A., ii, 463.

the precise measure of the layers of energy of the barium atom and the appearance of the L-spectrum of ionisation, A., ii, 542.

analysis of the electronic structure of the elements, A., ii, 559, 678.

Dauvillier, A. See also Maurice de Broglie.

Davey, Wheeler P. See Albert W. Hull.
Davidheiser, L. Y., and Walter A.
Patrick, adsorption of ammonia by silica gel, A., ii, 262.

Davidson, Arthur See James Kendall.

Davies, Ann Catherine. See Frank Horton.

Davies, Arthur Hugh, and Scottish
Dyes, Ltd., production of hydroxyderivatives of anthraquinone, A., i,

Davies, Arthur Hugh. See also John Thomas.

Davies, John Stanley Herbert. See Frederick Maurice Rowe.

Davies, William, preparation of p-nitrophenylhydrazine and other aromatic hydrazines, T., 715.

the cumulative effect of the chlorine atom and the methyl and sulphonyl chloride groups on substitution in the benzene nucleus. III., T., 785.

Davies, William, an instance of the apparent effect of the entering group on the position of substitution in the benzene nucleus, T., 806.

Davies, William, and Edgar Herbert Cuthbert Hickox, the synthesis of m-a-benzbispyrrole derivatives, T.,

Davies, William, and William Henry Perkin, jun. [with Herbert Clayton, the chlorination and bromination of the toluic acids and the preparation of

the phthalaldehydic acids, T., 2202. Davis, Clarke E., and Earl T. Oakes, physical characteristics of gelatin solutions, A., i, 597. Davis, Clarke E., Earl T. Oakes, and

Harold H. Browne, viscosity of gelatin solutions, A., i, 63.

Davis, C. W., separation of palladium and platinum by means of dimethyl-

glyoxime, A., ii, 662.

Davis, R. O. E., L. B. Olmstead, and F. O. Lundstrum, vapour pressures of ammonia-salt solutions, A., ii, 49.

vapour pressure of the system, lithium nitrate-ammonia, A., ii, 56.

Davis, Tenney L., preparation of guanidine nitrate, A., i, 117.

the action of aqueous ammonia on dicyanodiamide, A., i, 118.

the action of sulphuric acid on nitroguanidine, A., i, 530.

the rôle of mercuric nitrate in the "catalysed" nitration of aromatic substances. II. Nitration of naphthalene, A., i, 818.

Davisson, C., and C. H. Kunsman, the scattering of electrons by nickel, A., ii, 251.

Dawkins, Alfred Ernest, heterogeneous equilibria; the ternary system sodium sulphate-sodium carbonate-water, T., $77\bar{6}$.

Day, James Nelson Edmund. See Oscar *Lisle* Brady.

Debucquet, L., composition of a rhinolith, A., i, 497.

Decarrière, Eugène, the rôle of gascons impurities in the catalytic oxidation of ammonia; influence of hydrogen phosphide, A., ii, 284.

the rôle of gaseous impurities in the catalytic oxidation of ammonia gas,

A., ii, 284.

Decker, Herman, natural system of carbon compounds. I. General statement of Mendeléev's law on the numerical relationships between primary, tertiary, and quaternary carbon atoms, A., i, 417.

Decker, Herman, natural system of carbon compounds. II. Empirical and rational allologous series and their graphical representation as a system, A., i, 513.

Decker, Herman, and Paul Becker, ring opening in the benzopyrylium series, A., i, 358.

Decker, Herman. See also Friedrich Kehrmann.

Dede, L., the effect of scratching the wall of a vessel with a glass rod, A., ii, 744.

Dede, L., and P. Bonin, the hindrance of precipitations with hydrogen sulphide by neutral chlorides, A., ii, 766.

Deerns, W. W., the estimation of boric acid, A., ii, 867.

Dehn, William Maurice. See George W. Pucher.

Deighton, Thomas, some investigations on the electrical method of soil moisture estimation, A., i, 1227.

Delange, Raymond, the relationship of odour to molecular structure, A., i,

Delaplace, R., solubility of sulphur in certain organic liquids, A., ii, 706.

Delauney, P. See Henri Hérissey.
Delaygue, A. See Georges Bruhat.
Delépine, Marcel, the autoxidation of organic sulphur compounds, A., i, 621, 914.

complex iridium compounds, A., i, 859.

Delépine, Marcel, and René Demars copper salts of aminosulphonic acids A., i, 923.

Delépine, Marcel, and (Mme) Pierre Jaffeux, action of some acylic halogenated derivatives on hexamethylenetetramine, A., i, 234.

Deleuer, Maurice, thermo-compression and thermo-addition, A., ii, 684.

Delprat, G. D., and G. H. Whipple, liver function; benzoate administration and hippuric acid synthesis, A.,

Demars, René. See Marcel Delépine. Demichelis, L. See G. Charrier.

Demjanov, Nikolaus J., and Marie Dojarenko, methylenecyclobutane and dimethylcyclobutylmethylamine, A., i, 996.

the chlorohydrin and oxide of methylenecyclobutane and the transformation of the former into cyclopentanone, A., i, 1009.

vinylcyclopropane, certain derivatives of methylcyclopropylcarbinol and the isomerisation of the cyclopropane ring, A., i, 1014.

Demjanov, Nikolaus J., and Marie Dojarenko, preparation of cyclobutanone by the pyro-chemical decomposition of 1-hydroxycyclobutane-1-carboxylic

acid, A., i, 1161. Demjanovski, S., emjanovski, S., the preparation of histidine from blood, A., i, 1052.

Demolon, A., the sulphur-oxidising power of soils, A., i, 312.

the accessory elements of the dephosphoration slags, A., ii, 564.

Demoussy, Em. See Leon Maquenne. Dempster, A. J., positive ray analysis of lithium and magnesium, A., ii, 417.

Denaeyer, M. E., the chemical constitution of felspars; analysis of two microclines, A., ii, 451.

Denecke, G. See P. Morawitz.

Dengg, Rupert. See Alois Zinke. Dengin, E. F. See Nicolai D. Zelinsky. Denham, Henry George, sub-salts of bismuth, A., ii, 218.

Denham, Humphrey John, the structure of the cotton hair and its botanical

aspects, A., i, 615. Deniges, Georges, identification of small quantities of terpineol hydrate in

complex mixtures, A., ii, 789. Deniges, Georges, and R. Tourrou, micro-

chemical reactions of "dulcin" [pethoxyphenylcarbamide], A., ii, 95.

Denigès, Georges. See also C. Sauvageau. Denis, Willey, sulphates in blood, A., ii, 225.

estimation of magnesium in blood, plasma, and serum, A., ii, 659.

Denis, Willey, and L. von Meysenbug, a possible source of error in the Bell-Doisy method for the estimation of phosphates in blood plasma, A., ii, 584.

Denis, Willey, Warren R. Sisson, and Martha Aldrich, the effect produced on the composition of milk by the administration of certain inorganic and organic substances, A., i, 494.

Denis, Willey. See also Warren R. Sisson.

Denison, Irving A., the nature of certain aluminium salts in the soil and their influence on ammonification and nitrification, A., i, 512.

Dennett, John Horace. See John Albert Newton Friend.

Dennis, Louis Monroe, and F. E. Hance, germanium. III. Germanium tetrabromide and germanium tetrachloride, A., ii, 302.

Dennis, Louis Monroe, and Jacob Papish, germanium. I. Extraction from germanium-bearing zinc oxide; non-occurrence in samarskite, A., ii, 150. Dernby, Karl Gustav, extracellular bacterial proteases, A., i, 405.

Dernby, Karl Gustav, and B. Allander influence of the hydrogen-ion concentration on the growth and formation of toxin of tetanus bacilli, A., i, 303.

Dernikos, Diamandi. See Hans Prings-

Dersin, Hans, a new alkylamine and certain of its derivatives, A., i,

Derx, H. G., the configuration of ring systems in space, A., i, 651.

Derx, H. G. See also Jacob Böeseken. Desgrez. Alexandre, Henri Bierry, and F. Rathery, diabetes, β -hydroxybutyric acid, and lævulose, A., i, 1215.

Deshapande, Shankar Shridhar, and Jocelyn Field Thorpe, ring-chain tautomerism. II. The effect of the gem-diethyl group on the carbon tetrahedral angle, T., 1430.

Dessemond, A., estimation of volatile matter in a coal, A., ii, 456.

Detœuf, André, monochlorocarbamide; preparation of chlorohydrins by its action on ethylenic hydrocarbons, A., i, 236, 327.

Deuel, Harry J., and Oskar Baudisch, detection of thymine in the presence of sugar, A., ii, 670.

Deuel, Harry See also Oskar J. Baudisch.

Dezani, Serafino, genesis of thiosulphuric acid in animals, A., i, 968.

Dhar, Nilratan, some phenomena in the electromotive behaviour of certain metals, A., ii, 20.

the theory of reaction velocities, A., ii, 39.

the action of metals, such as copper and zinc, on an aqueous solution of ammonium nitrate, A., ii, 49.

new views on the constitution of chromic acid, A., ii, 382.

catalysis. XVI. Radiation as a factor in thermal and photochemical reactions, A., ii, 730.

Dhar, Nilratan, and N. N. Mittra, induced reactions and negative catalysis, A., ii, 630.

Dhar, Nilratan. See also B. C. Banerji, Nitya Gopal Chatterji, Phani Bhusan Ganguly, N. N. Mittra, R. M. Purkayostha, and P. B. Sarkar.

Dhéré, Charles, and A. Schneider, hæmocyanin. VI. and VII., A., i,

Di Capua, Clara, solubility in the solid state of bismuth and cadmium in lead, A., ii, 576.

Dickens, Frank, George Armand Robert Kon, and Jocelyn Field Thorpe, the formation and stability of spiro-compounds. VIII. The Die Komppa reaction, T., 1496. The Dieckmann-

Dickinson, Roscoe G., crystal structures of complex cyanides of potassium with zinc, cadmium, and mercury,

A., i, 532.

crystal structures of potassium and ammonium stannichlorides, A., ii, 287.

crystal structure of phosphonium

- iodide, A., ii, 640.

 Dickinson, Roscoe G., and Elbridge A. Goodhue, crystal structures of sodium chlorate and sodium bromate, A., ii, 145.
- Dieckmann, Theodor, and E. Houdremont, some compounds in the system CaO-PaO₅ and their relation to basic slag, A., ii, 292.

Dieckmann, Walter, keto-enolic equilibria and Claisen's rule, A., i,

1020.

- Dieckmann, Walter, and Adolf Wittmann, the relationship between the dimeric ketens and *cyclo*butane-1:3-dione and its derivatives, A., i, 1156.
- Diehl, Claus. See Emanuel Merck. Diels, Otto. The azo-ester reaction of amines and enols, A., i, 774.
- Diels, Otto [with Sörensen, Möhl, Aubart, Eckelmann, Kleinfeller, Harald Wackermann, and Fuldner], the azoester reaction with amines and enols, **A.,** i, 1194.
- Diels, Otto, and Harald Wackermann, the structure of the compounds obtained by the oxidation of the additive products of \(\beta\)-naphthylamine and azo-esters, A., i, 1068.

Dienes, Ludwig, increase of nitrogen after fleshy and meal diets, A., i,

Dieter, Walter, the capacity of yeast to degrade acid amides, A., i, 795.

Dieterle, H., xanthosterol, A., i, 652. Diethelm, Alois. See Karl Jellinek.

Dietrich, C. See Georg Schroeter. Dillon, Thomas, Rosalind Clarke, and Victor M. Hinchy, chemical method of separating the isotopes of lead,

A., ii, 710. Dilthey, Walther, arylated pyridines. III. Quinodihydropyridines, A., i,

Dilthey, Walther [with H. Kaffer], pyrylium compounds. XI. Pentaphenyl-pyrylium salts; the formulation of salts of dyes, A., i, 668.

Dilthey, Walther [with H. Kaffer, Heinrich Meyer, and J. Nüsslein], arylated pyridines and their relations to the corresponding pyrylium compounds. IV., A., i, 949.

Dimbleby, Violet, Constance M. Muirhead, and William Ernest Stephen Turner, effect of magnesia on the resistance of glass to corroding agents and a comparison of the durability of lime and magnesia glasses, A., ii, 709.

Dimroth, Otto, and Theo Faust, boric

esters of hydroxyanthraquinones, A., i, 155.

Dimroth, Otto, and Fritz Frister, reduction of pyridine with zinc dust and acetic anhydride. II., A., i,

Dimroth, Otto, and Richard Heene, reduction of pyridine with zinc dust and acetic anhydride, A., i, 48.

Dimroth, Otto, and Valentin Hilcken, anthradiquinones $\mathbf{a}\mathbf{n}\mathbf{d}$ anthratri-

quinones, A., i, 158.

Dimroth, Otto, Ernst Schultze, and Fritz Heinze, the action of bromine

on quinizarin and alizarin, A., i, 157. Dingemanse, E. See J. V. Dubsky. Dirken, M. N. J., relation between changes of temperature and consumption of oxygen by cold-blooded animals, A., i, 1207.

Dirlam, H. See Julius von Braun.

Dische, Z., the distribution of chloride between corpuscles and plasma and the influence of carbon dioxide, A., i, 1086.

Ditz, Hugo, detection of manganese with benzidine and of cobalt by means of the thiocyanate reaction, A., ii, 229.

Dixon, Henry Horatio, and Nigel G. Ball, photosynthesis and the electronic theory. II., A., ii, 248.

Dixon, Walter Ernest. See Douglas V.

Dobler, Friedrich, kinetics of the reaction between ammonia and aromatic aldehydes, A., ii, 435.

Dobrjanski, A. F., thermal analysis of the system o- and p-toluenesulphon-

amides, A., i, 1132.

Doctor, E. See Ludwig Moser.

Dodd, Alfred Herbert, the estimation of guanidine, A., ii, 536.

Dodge, Francis D., vanillin glyceride, A., i, 748.

Doerr, R., and W. Berger, the oligodynamic effect of silver. IV., A., i, 1097.

Dörries, W. See Adolf Windaus.

Doisy, Edward A., Emily P. Eaton, and K. S. Chouke, buffer systems of blood-serum, A., i, 963.

Dojarenko, Marie. See Nikolaus J. Demjanov.

Dolejšek, V., the lines K_{α} of the light elements, A., ii, 243. N-series in X-ray spectra, A., ii, 411,

Dolezalek, Friedrich, and M. Schulze, theory of binary mixtures. Mixtures of ethyl ether and bromoform, A., ii, 118.

Dombrowski, Stefan, and Stanislas Kozlowski, the sterilisation of the intestine during fasting, A., i, 606.

Dominik, W., the production of potassium hydrogen sulphate from ammonium hydrogen sulphate and potassium sulphate, A., ii, 145.

Donat, Hans. See Wilhelm Steinkopf. Donovan, F. K. See Alexander Hutcheon Bennett.

Dorabialska, Alicja, thermochemical researches on oximes. II. The stereoisomeric ethyl esters of oximinoacetoacetic acid, A., i, 725.

thermochemical researches on oximes. I. Ketoximes not exhibiting stereo-

isomerism, A., ii, 548.

Doren, L. van, H. K. Parker, and Paul Lotz, use of the water interferometer as a pressure gauge, A., ii, 263.

Dosne, Paul, a new method of color-

imetr**y, A., ii, 518.**

Doubleday, (Miss) Ida, boundary lubrication and chemical constitution; the optically active carbinols of the formula C2H5 CH(OH) CnH2n+1, T.,

Doubler, Francis H. See Leon Asher. Doucet, A. See Emile Luce.

Doughty, Howard Waters, and Benjamin Freeman, trihalogenmethyl reactions. IV. Reaction of trichloroacetic acid with copper, A., i, 427.

Downs, Charles R., catalytic oxidation of naphthalene, A., i, 27.

preparation of maleic acid, A., i, 984.

preparation of anthraquinone, A., i, 1039.

Downs, Charles R. See also John Maurice Weiss.

Arthur Wayland, and Lester Yoder, spiropyrimidines. III. Condensation of cyclopropane-1:1-dicarboxylic ester with carbamides, A., i, 180.

pyrimidines from alkylmalonic esters and aromatic amidines, A., i, 374.

Dox, Arthur Wayland, and Lester Yoder, the reaction between s-dichlorodimethyl ether and ethyl malonate, A., i, 429.

benzylalkylbarbituric acids, A., i, 681. some derivatives of n-butylmalonic acid, A., i, 808.

amide formation from esters of secondary alkylmalonic acids, A., i, 816.

Doyon, M., use of frogs to demonstrate the anticoagulating action of nucleic acids, A., i, 82.

action of nucleic acid injected into the organism; immunisation by a single injection, A., i, 1087.

Drakeley, Thomas James [with Frederick William Smith], the ultimate composition of British coals, T., 221.

Dreifuss, Max, tellurium lead and tellurium antimony alloys, A., ii, 503.

Dreifuss, Max. See also W. D. Treadwell. Drekopf, K. See Alfred Benrath.

Dresbach, Melvin. See Arthur Knudson. Dresel, K., and F. H. Lewy, sugar regulation in paralysis agitans, A., i, 969.

Drew, Harry Dugald Keith. See Gilbert Thomas Morgan.

Dreyfus, Henry, preparation of alkyl sulphates, A., i, 517.
Driggs, F. H. See B. Smith Hopkins.

Driver, John, and James Brierley Firth, the sorption of saturated vapours by charcoal, T., 2409.

Druce, John Gerald Frederick, isopropylstannonic acid and its derivatives, T., 1859.

the interaction of methyl iodide and potassium plumbite, A., i, 516.

the preparation and properties of organic stanno- and stanni-chlorides. IV. Some diamine stannichlorides, A., i, 639.

the preparation and properties of organic stanno- and stanni-chlorides. V. The salts of certain special bases, A., i, 1206.

Drummond, Jack Cecil, and Robert Keith Cannan, tethelin-the alleged growthcontrolling substance of the anterior lobe of the pituitary gland, A., i, 491.

Drummond, Jack Cecil, and Arthur Frederick Watson, the testing of foodstuffs for vitamins, A., ii, 596. the sulphuric acid test for liver oils, A., ii, 665.

Drummond, Jack Cecil. See also Henry Lyster Jameson.

Duane, William, calculation of the X-ray absorption frequencies of the chemical elements. I. and II., A., ii, 104.

CXXII. ii.

Duane, William, and Hugo Fricke, absorption of X-rays by chromium, manganese, and iron, A., ii, 804.

Duane, William, and R. A. Patterson, X-ray spectra, A., ii, 463. Duane, William. See also George L.

Clark.

Dubin, Harry E. See Casimir Funk.

Dubinin, Michael. See Nikolai Schilov. Duboc, (Mlle) T., the action of tribromoxylenol on the tubercle bacillus, A., i, 972.

Dubosc, André, chemical analysis of caoutchouc articles, A., ii, 91.

Duboux, Marcel, calculation of the second dissociation constant of dibasic acids from the hydrogen-ion concentration, A., ii, 346.

Dubrisay, René, the action of boric acid on mannitol in alkaline solution,

A., i, 1110.

the partial miscibility of liquid couples; applications to reactions between dissolved substances, A., ii, 428.

Dubsky, J. V. [with P. Aptekmann], neutralisation of the affinity of main and subsidiary valencies in compounds of a higher order. III., A., i, 104.

Dubsky, J. V., and E. Dingemanse, diketopiperazines. XI. 3:5-Diketo-1-benzylhexahydro-1:4-diazine, A., i,

Dubsky, J. V., and E. Hoher, diketopiperazines. XII. Attempted prepara-tion of 1-benzoyl-3:5-diketohexahydro-1:4-diazine, A., i, 57.

Dubsky, J. V., E. Hoher, and E. Dingemanse, diketopiperazines.

A., i, 57.

Dubsky, J. V. See also Hilmar Johannes Backer.

Duchaček, Franz, the diastatic value of malt, A., i, 974.

Duchoň, Františck. See Antonin Němec. Duckham, (Miss) Rebecca. See William

Howieson Gibson. Duclaux, J., the mechanism of continuous luminous radiation, A., ii,

Ducloux, Enrique Herrero, use of cæsium chloride in microchemistry, A., ii, 77.

Dudley, Harold Ward. See Henry Hallett Dale.

Düring, A. See A. Behre.

Dürrwächter, E. See Alexander Gutbier.

Dützmann, Amadäus. See Fritz Straus. Duff, James Cooper, complex metallic ammines. VII. Conductivities of diethylenediaminecobaltic bromides, T., 450.

Duffenback, O. S., dissociation of hydrogen in a tungsten furnace and low voltage arcs in monatomic gases, A., ii. 620.

Duffieux, M., the mass of the particles that emit the spectrum of carbon

monoxide, A., ii, 597.

Duffour, Alexis, a new example of hemihedral forms not conforming to the sign of the optical activity, A., i, 829.

Dufraisse, Charles, ethylenic stereoiso-

merism, A., i, 534.

Dufraisse, Charles, and Pierre Gérald, the supposed true dibenzoylmethane of Wislicenus; new experiments, A., i, 39.

the action of alcohols on a-bromobenzylideneacetophenone, A., i, 843.

Dufraisse, Charles. See also Charles Moureu.

Dufton, Arthur Felix, the separation of miscible liquids by distillation. II., T., 306.

Duin, C. F. van, steric hindrance of the sulpho-acid group, A., i, 139.

the addition of bromine to the transsubstituted cinnamic acids, A., i, 737.

Dumesnil, Philippe, the hydrolysis of the mono- and di-ethyl esters of diethylmalonic acid, A., i, 520.

the esterification of ethyl hydrogen diethylmalonate and of diethylmalonic acid, A., i, 622.

some derivatives of ethyl hydrogen diethylmalonate, A., i, 807.

Dunbrook, Raymond F. See Alexander Lowy.

Duncan, Herbert Maxwell. See Edward Charles Cyril Baly.

Dundon, Merle L., and William E. Henderson, measurement of solubility by floating equilibrium; solubility of lead acetate, A., ii, 552.

Dunham, Theodore, jun. See Theodore William Richards.

Dunn, Max S., and Howard B. Lewis, the action of nitrous acid on casein, A., i, 279.

the hydrolysis of casein and deaminised casein by proteolytic enzymes, A.,

Dunn, Max S., and Carl L. A. Schmidt, the influence of position and of temperature on the reaction of aliphatic amino-nitrogen with nitrous acid, A., i, 1124.

Dunoyer, Louis, the luminescence of gas in the electrodeless discharge; the induction spectra of cæsium and rubidium, A., ii, 729. Dunstan, Albert Ernest, and Ferdinand Bernard Thole, the chemical nature of mineral lubricating oils, A., i,

Dunstan, Arthur St. C., and Benjamin A. Wooten, arc-cathode spectra, A., ii, 99.

Duparc, Louis, and L. Ramadier, the volatilisation of arsenic and antimony by means of methyl alcohol, A., ii,

Dupont, Georges, the composition of the essential oil of turpentine from Aleppo, A., i, 357.

the formulæ of dicyclic terpenes, A., i, 1042.

Dupont, Georges. See also Maurice Vèzes.

Durand, J. F., catalysts and chemical equilibrium, A., ii, 701.

Durrans, Thomas Harold, the action of sulphuryl chloride on organic substances. I. Simple monosubstituted benzenes, T., 44.

absorption of ultra-violet light, A.,

ii, 7.

Durrant, Reginated Graham. See Henry Bassett.

Duschek, Alois. See Robert Müller.

Dutoit, Paul, and Edouard Grobet, carrying down by precipitates, A., ii, 550.

a new physico-chemical method of volumetric analysis applied to some problems of inorganic chemistry, A., ii, 578.

Dutt, Sikhibushan, dyes derived from phenanthraquinone. II. Naphthaflavindulines, T., 1951.

dyes derived from "saccharin"; the sulphamphthaleins, T., 2389.

Dutt, Sikhibushan, and Nirmal Kumar Sen, dyes derived from aa'-dicyanodibenzyl diketone, T., 2663.

Dutt, Sikhibushan. See also Anukul Chandra Sircar, and Edwin Roy Watson.

Dux, Paul, and Artur Löw, osmotic behaviour of frog's muscle, deficient in water and poisoned by glycerol, and on the shrinkage of muscle protein, A., i, 398.

Duysen, Franz. See Erich Schmidt.

Dvořak, K. See V. Veselý. Dyer, J. W. W., and Amy R. Watson, determination of sulphur in vulcanised rubber, A., ii, 656, 782.

Dziewoński, Karol, and J. Suszko, the pyrogenic transformation of fluorene, A., i, 730.

E

Eakle, Arthur Starr, massive troilite from Del Norte Co., California, A., ii, 858.

Earl, John Campbell. See James Col-

quhoun Irvine.

Early, Reginald George, and Thomas MartinLowry, the properties of ammonium nitrate. III. Ammonium nitrate and sodium nitrate, T., 963.

Eastman, Ermon Dwight, double and triple bonds, and electron structures in unsaturated molecules, A., ii, 367.

equilibria in the systems iron-carbonoxygen and iron-hydrogen-oxygen, and the free energies of the oxides of iron, A., ii, 506.

Eaton, Elgar O., estimation of mono-bromocamphor, A., ii, 326.

Eaton, Emily P. See Edward A. Doisy.

Ebert, Ludwig, newer investigations on the anomaly of the strong electrolytes, A., ii, 113.

Ebin, D. See J. Altwegg.

Ebler, Erich, and A. J. van Rhyn, the radioactivity of mineral springs. II., A., ii, 16.

the adsorption of radioactive substances. II., A., ii, 16.

Eckart, Hanns, beef bone fat and neat's foot oil, A., i, 967.

Eckelmann. See Otto Diels.

Eckert, Alfred, and Gertrud Endler, highly condensed derivatives xanthone, A., i, 941.

Eckert, Alfred, and Rudolf Endler, chlorination of quinol, A., i, 932.

Eckert, Alfred, Fritz Seidel, and Gertrud Endler, phenylcarbazole, A., i. 952.

Eckert, G. See Fritz Arndt.

Eckstein, H. See Alfred Benrath.

Edelmann, R. F. See W. D. Treadwell. Eder, Alois, the estimation of cobalt in steel, A., ii, 458.

Eder, Robert, and C. Widmer, derivatives of \$\beta\$-methylanthraquinone. I. Syntheses of chrysophanic [1:8-dihydroxy-3-methylanthraquinone] and of 1:5 dihydroxy-3 methylanthraquinone, A., i, 260.

Ederer, Stefan, the influence of the concentration of sugar on the synthesis of glycogen, A., i, 895.

Edgar, Graham, and R. B. Purdum, rapid electrolysis without rotating electrodes, A., ii, 547.

Edgar, Graham, and W. O. Swan, factors determining the hygroscopic properties of soluble substances. I. Vapour pressures of saturated solutions, A., ii, 349.

Graham.See also Edgar, Arthur Becket Lamb.

Edge, Stephen Rathbone Holden, benzbisthiazoles, T., 772.

Edlbacher, Siegfried, the free aminogroups of the proteins, A., i, 279. hydroxyproteic acids, A, i, 692. the proteic acids of urine. the hydroxyproteic acids, A., i, 883.

Edlbacher, Siegfried, and Berthold Fuchs, the influence of β-naphthalenesulphonyl chloride on the proteins,

A., i, 279.

Edwards, C. A., and A. J. Murphy, the rate of combination of copper and phosphorus at various temperatures, A., ii, 645.

Effront, Jean, the distinctive properties of amylases from different sources, A., i, 184.

effect of filtration on amylases, A., i, 1076.

characteristic properties of amylases of different origin, A., i, 1076.

Ege, Rich. See Valdemar Henriques. Egerer-Seham, Grete, and C. E. Nixon, chemistry of blood and spinal fluid, A., i, 395.

Egger, L. See W. D. Treadwell. Eggert, John, sensitiveness of verv

sensitive explosives, A., ii, 133.
Eggert, John, and W. Noddack, verification of the photochemical equivalent law with photographic dry plates, A., ii, 9.

Ehmer, Wilhelmine. See Alois Zinke. Ehrenberg, Rudolf, protein enzymes, A., i, 597.

Ehrenberg, Rudolf, and Alfred Karsten, urine iron, and renal function, A., i, 967.

Ehrenfest, P., the difference between series spectra of isotopes, A., ii, 598.

Ehrhart, Gustav. See Theodor Curtius. Ehrlich, Josef. See Ludwig Moser. Eichelberger, Marietta, the carbohydrate

content of navy beans, A., i, 799. Eichler, Fritz. See Erwin Ott.

Eichwald, Egon, the action of the brush discharge on fatty acids and their

glycerides, A., i, 982. Eifflaender, L. See A. Lüttringhaus. Eilert, August, construction of platinum film electrodes and their method of use, A., ii, 610.

Einbeck, H. See Georg Schroeter. Eirich, Lina. See H. Finger.

Eisenhardt, W., and R. Schaefer, variations in chloride-metabolism due to menstrual processes, A., i, 83.

Eisenlohr, Fritz, the molecular refraction of substances of higher melting point and the calculation of the corresponding refractive exponents to the temperature of comparison, 20°, A., ii, 1.

Ekeley, John Bernard, E. C. Rogers, and Margaret Swisher, the action of acetic anhydride on some benzylideneanthranilic acids. V. A., i, 934.

Ekkert, L., colour reactions of phenacetin and acetanilide, A., ii, 169.

Elam, Constance F. See Henry Cort Harold Carpenter.

Elder, Robert B., measurement of surface tension, A., ii, 618. Eldridge, E. F. See Dwight T. Ewing.

Elektrochemische Werke G. m. b. H., Heinrich Bosshard, and David Strauss, preparation of water-soluble derivatives of aryl ethers of higher aliphatic alcohols, A., i, 913.

Elias, Herbert, and Ubaldo Sammartino, the part played by acid in carbo-hydrate metabolism. IV. The relation between acid and alkali and adrenaline-glycosuria, A., i, 86.

Elias, Herbert, and E. A. Spiegel, tetany, A., i, 401.

Elias, Herbert, and St. Weiss, the rôle of acid in carbohydrate metabolism. V. The action of acid and alkali on the carbohydrate metabolism of

yeast-cells, A., i, 485. the action of the phosphate-ion on blood and urinary sugar, A., i,

Eliasberg, Paul. See S. Kostytschev. Eller, Wilhelm, synthesis of the humic acids, A., i, 326.

Eller, Wilhelm, and L. Klemm, the action of sulphuryl chloride on aromatic amines, A., i, 448.

Ellinger, Alexander, and S. M. Neuschlosz, comparison of the viscosity and velocity of ultra-filtration of

serum, A., i. 484. Ellinger, Philipp, the influence of potassium and of radioactivity on the oxidation velocity of the red corpuscles, A., i, 288.

the pharmacology of cell respiration, A., i. 492.

Elliott, Felix A. See Samuel Edward Sheppard.

Elliott, George Robert, preparation and properties of the benzochloroamides, T., 202.

Ellis, C. D., β-ray spectra and their meaning, A., ii, 339.

the interpretation of β -ray and γ -ray spectra, A., ii, 466.

Ellis, C. D. See also James Chadwick. Ellsworth, H. V., and E. Poitevin, camsellite, a new borate mineral from British Columbia, A., ii, 304.

Ellsworth, H. V. See also R. A. A. Johnston.

Elschner, Carl, colloidal phosphates, A., ii, 714.

Elsey, Howard M. See Hamilton Perkins Cady.

Embden, Gustav, and Erich Adler. physiological significance of the change in the condition of permeability in the limiting membrane of the muscle fibres, A., i, 196.

Embden, Gustav, and Heinz Lawaczeck, formation of phosphoric acid in the contraction of frog's muscle, A., i,

492

Emerique, L. See L. Lapicque.

Emery, William O., and Clarence D. Wright, distribution of certain drugs between immiscible solvents, A., ii, 205.

Emmert, Bruno, and Paul Parr, action of iodine on NN'-dialkyltetrahydro-

4:4'-dipyridyls, A., i, 179. Emmert, Bruno, and Otto Varenkamp, 1:1'-dialkyltetrahydro-4:4'-dipyridyls, A., i, 1064.

Emmert, Bruno, and Otto Werb, 1:1'dimethyltetrahydro-4:4' dicollidyl [1:2:4:6:1':2':4':6'-octamethyltetrahydro-4:4'-dipyridyl], A., i, 680.

Emslander, R. See Alexander Gutbier. Emster, Konrad van. See Hans Meerwein.

Enderlin, Fr. See Karl W. Rosenmund. Endler, Gertrud. See Alfred Eckert. Endler, Rudolf. See Alfred Eckert.

Endres, Gustav, the relation between the true reaction of the urine and the alveolar tension of carbon dioxide, A., i, 1214.

Engeland, R., the free amino-groups of the proteins, A., i, 279.

the detection and estimation of monoamino-acids, A., ii, 536.

Engfeldt, N. O., the effect of Dakin's hypochlorite solution organic substances, A., i, 812.

England, E. H. See Henry Droop Richmond.

Englis, Duane T., and Chuk Yee Tsang, the clarification of solutions containing reducing sugars by basic lead acetate; the effect of different deleading agents, A., ii, 459.

Engström, N. H., temperature correction in bomb calorimetry, A., ii, 27.

Ennos, F. R. See W. F. P. McLintock. Ens, H. See Karl Jellinek.

Entat, M, and E. Vulquin, detection and estimation of free sulphuric acid and sulphoacetates in cellulose acetates, A., ii, 533.

Ephraim, Fritz, and Eduard Michel, metallic hydrides. II. Hydrides of II. Hydrides of the alkaline-earth metals and of lithium, A., ii, 58.

Ephraim, Fritz, and Paul Mosimann, solubility. VI. Solubility of amsolubility. moniates, A., ii, 574.

Eppinger, Hans, chemistry of amyloid degeneration. A., i, 497.

Eppley, Marion, and Warren C. Vosburgh, electrometric titration of dichromate with ferrous sulphate, A., ii, 876.

Erdenbrecher, A., sodium silicate, A., ii, 444.

Erdstein, F., and L. Fürth, the action of polished metals on toxins, A., i, 90.

Erickson, E. Theodore, tschermigite (ammonium-alum) from Wyoming, A., ii, 304.

Ericson, Göeta. See Hans von Euler. Ernst, A., a new apparatus for washing

gases, A., ii, 839.

Ernst, Z., and B. Szappanyos, formation of bilirubin in surviving spleen, A., i, 108**9.**

Ernst, Z., and St. Weiss, modification of Bang's method for the estimation of sugar in the blood, A., ii, 724. Ernström, Efr., the temperature co-

efficients in the degradation of starch and the thermostability of diastase and ptyalin, A., i, 599.

Errera, J., dielectric constants colloidal solutions, A., ii, 694.

Ertl, Arthur. See Roland Scholl. Ertl, K. See Ludwig Moser.

Gerhard. See CarlEschenhagen,

Tubandt. Eskola, Penti, the silicates of strontium

and barium, A., ii, 849. Espenschied, H. See Alfred Benrath.

Estermann, I. See M. Volmer. Estill, Howard Wilmot. See

See George Shannon Forbes.

Etienne, G., and M. **Vérain**, partition of urea in blood, A., i, 963.

Ettisch, M., Michael Polanyi, and K. Weissenberg, fibrous structure of hard drawn metal wires, A., ii, 201.

Eucken, Arnold, theory of adsorption processes, A., ii, 262, 550.

moment of inertia and structure of the carbon dioxide molecule, A., ii, 349.

Eucken, Arnold, and O. Neumann, the possible existence of metallic compounds in the state of vapour, A., ii, 567.

Eucken, Arnold. See also R. Bartels. Euler, (Mme) Astrid Cleve von, catechu and catechin, A., i, 45.

toxicity of methyl alcohol, A., i,

chemical constituents of pine leaves. II., A., i, 100.

the lignin-like resins and tannins of spruce needles, A., i, 233.

Euler, Hans von [with Arvid Hedelius and Zimmerlund], ionic equilibria on metallic surfaces, A., ii, 251.

Euler, Hans von, and Stig Bergman, combination of iodine and starch, A., i, 921.

Euler, Hans von, and Göeta Ericson, degree of dispersion of saccharase, A.,

Euler, Hans von, and Ulf von Euler, the formation of oxides of multivalent metals from their hydroxides, A., ii.

Euler, Hans von, and A. Fahlander. separation of halogens from organic compounds, A., ii, 360.

Euler, Hans von, and K. Josephson, Saccharomyces marxianus and top fermentation yeast R, A., i, 706. a silver compound of saccharase, A., i,

1076. Euler, Hans von, and Signe Karlsson, accelerators of fermentation, A., i,

Euler, Hans von, and Sture Landergren. combination of iodine and starch. II., A., i, 921,

the inactivation of saccharase by iodine, A., i, 1076.

Euler, Hans von, and Karl Myrback, vitamin-B and co-enzymes. A., i, 293.

the thermolability of the sucrosesplitting enzyme of the human jejunum, A., i, 295.

compounds of iodine with constituents of starch, A., i, 527.

the conditions of acidity and thermol-

ability of saccharase, A., i, 693. inactivation of saccharase by small quantities of silver salts, A., i, 959.

the absorption of iodine by starch, A., i, 1120.

enzyme chemistry, A., i, 1201. Euler, Hans von, and Folke Nordlund, the enzymic synthesis of fructosediphosphate (hexosephosphate), A., i, 306

Euler, Hans von, and Olof Svanberg, carboxylic esters as amphoteric electrolytes, A., i, 219.

the regeneration of inactivated saccharase by dialysis, A.,i, 284.

the saccharase of the intestine, A., i, 296.

the phosphorus content of purified saccharase preparations, A., i, 1200.

Euler, Hans von, and G. Zimmerlund, salt adsorption on metal surfaces, A., ii, 822.

Euler, Hans von. See also G. J:son Blohm.

Euler, Karl. See Stefan Goldschmidt. Euler, Ulf von. See Hans von Euler.

Evans, Bernard Scott, the estimation of smail quantities of antimony in copper and brass, A., ii, 231.

Evans, C. A. Lovatt, acid production in shed blood, A., i, 890.

Evans, Edward Victor. See Henry Edward Armstrong.

Evans, Richard Bromley. See Archibald Edwin Goddard.

Evans, Ulick R., passivity and overpotential, A., ii, 814.

Evans, William Lloyd, and Paul R. Hines, the oxidation of potassium acetate to potassium oxalate, A., i, 803.

Evans, William Lloyd, and Ora L. Hoover, the oxidation of acetylcarbinol with potassium permanganate, A., i, 911.

Evans, William Lloyd, and Cloyd D. Looker, the influence of potassium hydroxide on the formation of vinyl alcohol from acetaldehyde, A., i, 102.

Evans, William Lloyd, and Lily Bell Sefton, the oxidation of isopropyl alcohol with potassium permanganate, A., i, 1108.

the oxidation of acetone with potassium permanganate, A., i, 1115.

Eve, Arthur Stewart, ionisation potential

and the size of the atom, A., ii, 364. venden, James. See H. V. Atkinson Evenden, James. and Graham Lusk.

Everest, Arthur Ernest, and Archibald John Hall, the tinctorial properties of some anthocyanins and certain related

pigments. II., A., i, 265. Evers, E. W. See George Leslie Kelley. Evers, Fritz. See Carl Dietrich Harries. Evers, Norman, method for the separa-

tion of strychnine from quinine, A., ii. 669.

Evers, Norman. See also John Leonard Lizius.

Ewart, Alfred James, synthesis of sugars from formaldehyde, carbon dioxide, and water, A., i, 10.

Ewbank, (Miss) Elinor Katharine. See Nevil Vincent Sidgwick.

Eweyk. C. van, and M. Tennenbaum,

secretin. I. and II., A., i, 397.

Ewing, Dwight T., and E. F. Eldridge, electrometric titration of uranium with potassium permanganate and potassium dichromate, A., ii, 661.

Ewing, Dwight T. See also William

Draper Harkins.

Ewing, (Sir) J. Alfred, the quantum mechanism in the atom, A., ii, 633.

F.

Fabre, René, the constitution of resorcinol and some of its derivatives, A., i, 1147.

a reaction of veronal and of the hypnotics derived from barbituric acid, A., ii, 795.

Fabriques de Produits chimique de Thann et de Mulhouse, preparation of borneol, A., i, 560.

Fabris, E., solubility of potassium ferrocyanide in water; ice curve and cryohydric point, A., i, 329.

Fabris, Stanislao, cholesterol in cerebrospinal fluid, A., i, 969.

Färber, Eduard. See Erik Hägglund. Fahlander, A. See Hans von Euler.

Fahrion, Wilhelm, colophenic acids, A., i, 423.

the analysis of partly hydrolysed fats. II., A., ii, 401.

Faillebin, mixed organometallic compounds of aluminium, A., i, 119.

Fairbairn, (Miss) Ruth. See William Howieson Gibson.

Fairbrother, Fred, cell for the observation of colloidal solutions for use with substage ultra-condensers, A., ii, 485.

Fairbrother, Fred, and Enoch Swan, the dissolution of gelatin, T., 1237.

Fairbrother, Thomas H., and Arnold Renshaw, the relation between chemical constitution and antiseptic action in the coal tar dyes, A., i, 612.

Fairhall, L. T., lead. I. Estimation of minute amounts of lead in biological

material, A., ii, 659.

Kasimir, Fajans, action of forces between separated atoms in diamond and aliphatic molecules, A., ii, 194. the energy of the atomic liukings in diamond and in aliphatic hydro-

carbons, A., ii, 818.

Falciola, Pietro, cinnamic acid in cryo-scopy, A., ii, 421.

reaction between thiosulphuric and nitrous ions, A., ii, 453.

Falciola, Pietro, detection of the nitrous

anion, A., ii, 783.

Fales, Harold A., and Jacques C. Morrell, new type of sodium lamp for polarimetry, A., ii, 43.

velocity of inversion of sucrose as a function of the thermodynamic concentration of the hydrogen-ion, A., ii, 832.

Fales, Helen L., analysis of camel's colostrum, A., i, 1090.

Falk, Kurt. See Alfred Lottermoser. Falkenheim, Susanne. See Adolf Sonn.

Falkner, (Miss) D. H. Mabel Harriet Norris. See (Miss)

Falta, Wilhelm, and M. Richter-Quittner, the distribution of sugar between corpuscles and plasma, A., i, 696.

Faltis, Franz, and Mathilde Krausz, the course of the decomposition of apomorphine by reduction by Emde's method, A., i, 676.

Faltis, Franz, and Felix Neumann, alkaloids of the pareira root. II. isochondodendrine, A., i, 569.

Faltis, Franz, and Carla Ruiz de Roxas, some transformations of ethyl y-bromo-ay-dicarboxy-glutaconate, A., i, 624.

Faragher, W. F., and Frederic Horace Garner, the elimination of hydrogen chloride from chlorohydrocarbons, A., i, 3.

Farbenfabriken vorm. F. Bayer & Co., preparation of derivatives of cholic acid, A., i, 554.

preparation of complex iron compounds of the phosphoric esters of higher aliphatic polyhydroxyl compounds, A., i, 631.

preparation of symmetrical aryl alkyl ethers, A., i, 934.

preparation of bromodialkylacetylcarbamides, A., i, 992.

of mono-substituted preparation sulphonamides, A., i, 999.

Farbwerke vorm. Meister, Lucius, & Bruning, preparation of anthraderivatives [1:2-anthraquinone quinonylisooxazoles], A., i, 178.

preparation of esters of dihydroxydiethyl sulphide, A., i, 420.

preparation of new therapeutically active acridine derivatives, A., i, 468.

preparation of dialkylaminoalkyl com-

pounds, A., i, 529. preparation of \(\beta\)-aracyl-\(\alpha\)-dialkylaminoethylbutyric esters, A., i,

preparation of ring ketones of the quinoline series, A., i, 867,

Farbwerke vorm. Meister, Lucius, & Brüning, preparation of aminoacetyl compounds of 4-amino-1-phenyl-2:8-dialkylpyrazolones, A., i, 954. preparation of carbamide from cyana-

mide, A., i, 993.

preparation of aromatic selenium compounds, A., i, 1066.

Fargher, Robert George, and William

Fargher, Robert George, and William Herbert Gray, chemotherapy of antimony; comparison of antimony tartrates with organic compounds of antimony, A., i, 404, 705.

Fargher, Robert George, and John Charles Withers, the chemical constituents of

raw cotton, A., i, 615.

Fargher, Robert George. See also Percy Herbert Clifford.

Farmer, Ernest Harold, the addition of ethyl sodiocyanoacetate and ethyl sodiomalonate to ethyl mucovate, T., 2015.

Farmer, Ernest Harold, Christopher Kelk Ingold, and Jocelyn Field Thorpe, the chemistry of polycyclic structures in relation to their homocyclic unsaturated isomerides. II. Intraannular tautomerism, T., 128.

annular tautomerism, T., 128.

Farmer, Robert Crosbie, the velocity of decomposition of high explosives in a vacuum. III. Mercuric fulminate,

T., 174.

Fauré-Fremiet, E., constitution of the egg of Sabellaria alveolata, L., A., i, 85.

Fauré-Fremiet, E., and (Mlle) H. Garrault, constitution of the ovarian egg of the carp (Cyprinus carpio), A., i, 700.

constitution of the egg of the trout

(Trutta fario), A., i, 700.

Fauré-Fremiet, E., and (Mile) du Vivier de Streel, chemical constituents of the egg of the common frog (Rana temporaria) and their rôle in its embryonic development, A., i, 85.

Faurholt, Carl, the processes $\mathrm{NH_2 \cdot Co \cdot ONH_4 + H_2O} \rightleftharpoons (\mathrm{NH_4})_2\mathrm{CO}_3$ and $\mathrm{CO_2 + H_2O} \rightleftharpoons \mathrm{H_2CO_3}$, A., ii, 272.

the ammonium carbonate-carbamate equilibrium, A., ii, 747.

Faust, E. S., camphoric acid derivatives,

A., i, 748.

Faust, Otto, binary liquid mixtures,

A., ii, 423.

Faust, Theo. See Otto Dimroth. Favreau, M. See A. Labat.

Fayolle, and Ch. Lormand, perforation apparatus for the extraction of liquids by liquids; non-miscible liquids, A., ii, 759.

Fazi, Remo de, syntheses of new glucosides, A., i, 755.

Fazi, Remo de. See also Romolo de Fazi.

Fazi, Romolo de, and Remo de Fazi, action of ultra-violet rays on Saccharomyces cerevisiae, A., i, 1219.
Feer, Emanuel. See Emile Cherbuliez.

Feer, Emanuel. See Emile Cherbulies.
Feigl, Friedrich, the oxidising properties
of carbon suspensions. A. ii 51.

of carbon suspensions, A., ii, 51. the use of benzidine in the detection of phosphoric acid, A., ii, 865.

Feist, Franz, isomerism in the glutaconic acid series, A., i, 521.

action of bromine on methylal, A., i, 912.

Feist, Franz, and Paul Karl Breuer, the two β-methylglutaconic acids, A., i, 521.

αβ-dimethylglutaconic acid, A., i, 521.
 Feist, Franz, Paul Karl Breuer, and Bernh. Lubricht, α-carboxy-β-phenyla-methylglutaconic esters and the isomerism of the phenylglutaconic acids, A., i, 553.

Feist, Karl, and A. Futtermenger, the optical activity of catechins, A., i, 565.

Feit, Hellmuth. See Kurt Lindner.

Feld, G. W. See Ernst Hermann Riesenfeld.

Feldmeier, Gregor. See Karl Fleischer. Feldsberg, Emil. See Sigmund Fränkel. Felix, K., a basic protein derivative, A., i, 295.

histopeptone, A., i, 479.

the digestion of histone sulphate with pepsin and hydrochloric acid, Δ., i, 693.

a basic peptone-like substance in the thymus, A., i, 702.

Fellenberg, Theodore von, estimation of the various acids of wine, A., ii, 534.

Fenger, Frederic, chemical composition and physiological characters of brain cephalin, A., i, 315.

Ferber, Erwin. See Kurt Brass.

Ferguson, Alfred L., and Wesley G.
France, transport numbers of sulphuric acid by the concentration cell method, A., ii, 113.

influence of gelatin on the transport numbers of sulphuric acid, A., ii, 114.

Ferguson, John. See Robert Martin Caven.

Ferguson, John Bright, melting interval of certain undercooled liquids: the use of liquid air as a refrigerant, A., ii, 614.

melting and freezing point of sodium chloride, A., ii, 848,

Ferguson, John Bright. See also G. A. Williams.

Ferjančič, S. See Maximilian Samec.
Fernández, Obdulio, and T. Garmendia,
Endo's reaction, biology of Bacillus coli, A., i, 405.

Fernández, Obdulio, and A. Pizarroso, the catalytic power of flour, A., ii, 94.

Fernau, Albert, and Wolfgang Pauli, action of penetrating radium radiation on inorganic and bio-colloids. III., A., ii, 202.

Fernbach, Auguste, and Marcel Schoen, the rôle of acetaldehyde in alcoholic fermentation, A., i, 203.

Ferrara, Manfredi, pharmacological action of magnesium sulphate and its application in strychnine poisoning, A., i, 500.

Ferrer, Juan. See Heinrich Wieland. Ferrer Tomás, Juan. See Antonio García Banús.

Ferri, Lelio. See Umberto Sborgi.

Fester, G., and G. Brude, the properties of potassium permanganate, A., ii, 771.

Fetkenheuer, B., detection of fluorine, A., ii, 655.

Feulgen, R. See Wilhelm Stepp.

Fichter, Franz, biochemical and electrochemical oxidation of organic compounds, A., ii, 23.

Fichter, Franz, and Gustav Grisard, the electrochemical oxidation of aromatic nitriles, A., i, 37.

Fichter, Franz, and Wolfgang Jack, the electrochemical oxidation of azobenzene, A., i, 62.

Fichter, Franz, and Ernst Jenny, the heat of formation of aluminium nitride, A., ii, 615.

Fichter, Franz, and Hans Löwe, the electrochemical oxidation of o-toluene-sulphonamide, A., i, 242.

Fichter, Franz, and Hugues de Montmollin, electrochemical studies in the pyrazole group, A., i, 470.

Fichter, Franz, and Emil Rothenberger, electrochemical oxidation of dimethylaniline, A., i, 447.

Fichter, Franz, and Richard Suter, magnesium cyanide, A., i, 532. cathodic reduction of elementary nitro-

gen, A., ii, 372.

Fielding. William R., behaviour of substances near the absolute zero, A., ii, 23.

polymerisation at the critical temperature, A., ii, 421.

Fierz, Hans Eduard, constitution of carbonium dyes, A., i, 445.

Fierz, Hans Eduard, and Richard Sallmann, attempts to prepare perinaphthindigotin, and the behaviour of azo-dyes from naphthylglycines, A., i, 870.

Fierz, Hans Eduard, and Richard Tobler, 2:2'-ββ-naphthindigotin, A., i, 869.

Fieser, L. F. See James Bryant Conant. Fillon, Robert. See Gustav Hinard.

Finch, George Ingle, and Raymond Harold Kelsall Peto, purification of phosphoric oxide, T., 692.

Findlay, Alexander, and Owen Rhys Howell, the rate of evolution of carbon dioxide from solution in presence of colloids, T., 1046.

Findlay, Alexander, and Cyril Rosebourne, decomposition and stabilisation of ammonium nitrate in presence of oxidisable material, A., ii, 291.

Findlay, Alexander, and Vernon Harcourt Williams, electrolytic reduction of dextrose, A., i, 523.

Finger, H., and Lina Eirich, new synthesis of hydroxylated benzoylformic [phenylglyoxylic] acids, A., i, 254.

Finks, A. J. See David Breese Jones.

Fioletova, Alexandra. See Nicolai Antonovich Pushin.

Fiori, Q. See G. de Sanctis. Fioroni, W. See P. Karrer.

Firth, James Brierley. See John Driver. Fischer, A., and W. Classen, the vol-

Fischer, A., and W. Classen, the volumetric estimation of dithionates, A., ii, 453.

Fischer, Artur. See Helmut Scheibler. Fischer, E. See Fritz Mayer.

Fischer, Franz, [lignite producer tar], A., i, 330.

Fischer, Franz, and Georg Pfleiderer, the solubility of oxygen in various organic solvents, A., ii, 841.

Fischer, Georg. See Rudolph Friedrich Weinland.

Fischer, Hans, and Hermann K. Barrenscheen, the azo-dyes of bilirubin. I., A., i, 278.

Fischer, Hans, and Marianne Hermann, pyrroles and hydroxypyrroles, A. i, 1054.

Fischer, Hans, and Maria Kaan, the iron salts of dipyrrylphenylmethane dyes and triphenylpyrrylmethane. II. Diphenylpyrrylcarbinol and its derivatives, A., i, 869.

Fischer, Hans, and Viktoria Luckmann, the iron salts of dipyrrylphenylmethane dyes; triphenylpyrrylmethane.

I., A., i, 276.

Fischer, Hans, Karl Schneller, and Werner Zerweck, [with Max Schubert], pyrroles. III. Ketones, ketonic acid esters, and ketonic acid nitriles of substituted pyrroles, A., i, 1055.

Fischer, Hans, and Werner Zerweck, pyrroles. I. Pyrrolealdehydes, A., i, 758.

pyrroles. II. Nitration of substituted pyrroles, A., i, 758.

Fischer, Heinrich. See Erich Schmidt. Fischer, Martin Henry, and George D. McLaughlin, theory of the Liesegang rings, A., ii, 206.

Fischer, Martin Henry, George D. McLaughlin, and Marian O. Hooker, soaps and proteins. I. Colloidal chemistry of soaps and the manufacture of soap, A., ii, 430.

soaps and proteins. II. Colloid chemistry of soap; manufacture, analogies in the colloid chemistry of soaps, albumins, and tissues. III. Colloid chemical behaviour of fatty acids and their derivatives and the analogous behaviour of neutral proteins and their derivatives, A., ii, 829.

Fischer, Otto, [with H. Kracker, Wolfgang Meier, and H. Schwappacher], the constitution of the products arising from the condensation of o-aminoazocompounds with aldehydes. I., A., i,

Fischer, Otto, and Martin Bollmann, formation and properties of fluorescein, A., i, 936.

Fischer, Richard, pharmacology of car-

bon oxysulphide, A., i, 402. Fischer, Roger, colloidal equilibrium of

blood serum, A., i, 1209. Fischer, Wilhelm. See Wilhelm Biltz. Fischler, M., device for the removal of

fumes, A., ii, 388. Fisher, E. A., relation of the hydrogen-

ion concentration of the soil to plant distribution, A., i, 510.

Fiske, Cyrus H., the "alkaline tide" after meals. I., A., i, 88.

inorganic phosphate and acid excretion in the post-absorptive period, A., i,

method for the estimation of total base in urine, A., ii, 408.

Fitger, Peter, stereoisomeric ethylthiolsuccinic acids, A., i, 107.

certain products of the oxidation of inactive ethylthiolsuccinic acid, A., i, 108.

Fitz, Reginald, acetone substances in the blood in diabetes, A., i, 192.

Flater, E. See Paul Pfeiffer.

Flecker, Oriel Joyce, and (Miss) Millicent Taylor, studies of the constitution of soap solutions; sodium believate and sodium nonoate, T., 1101.

Fleisch, Alfred, an equilibrated sterilisable fluid of physiological hydrogenion concentration, A., i, 964.

blood in impaired cell respiration; cause of avian beri-beri, A., i, 1215.

Fleischer, Karl, and Gregor Feldmeier, ar-aldehydes of tetrahydronaphthalene, A., i, 1160.

Fleischer, Karl, and Ewald Retze, syn-

thesis of pyrene, A., i, 1138.
Fleischer, Karl, and Karl Schranz, 5aminoacenaphthene, A., i, 1142.

Fleischhauer, C. See Georg Schroeter. Fleischmann, Walter. See Utto von Fürth.

Fleming, William D., vitamin content of rice by the yeast method; organic nitrogen as a possible factor in stimulation of yeast, A., i, 93.

Fleury, Paul, colorimetry, A., ii, 518.

Fleury, Paul, and Louis Boutot, the modified Lehmann method for the estimation of dextrose; adaptation to small quantities of reducing sugars, A., ii, 879.

Fleury, Paul, and Gabriel Poirot, the orcinol reaction with furfuraldehyde; application to the colorimetric estimation of small quantities of furfuraldehyde, A., ii, 595.

estimation of small quantities of furfuraldehyde colorimetrically, A., ii,

See Ludwig Pin-Floros, Aristomenis. cussen.

Flütsch, Chr. See Karl W. Rosenmund.

Fodor, Andor, colloidal chemistry of the

proteins. III., A., i, 691.

Fodor, Andor, and B. Schönfeld, dependence of the adsorption by charcoal on the quantity of charcoal and the nature of the adsorption isothermal, A., ii, 688.

Fodor, Andor. See also Emil Abderhalden.

Föhrenbach, Erich. See Emil Fromm. Földi, Zoltan, alkylation of amines with sulphonic esters, A., i, 732.

Foerster, Fritz, nitrous anhydride, A., ii, 284.

Försterling, Karl, the emission of light by atoms, A., ii, 729.

Fogg, H. C., and Charles James, atomic weight of yttrium, A., ii, 297.

Fogler, M. F. See Roger Adams.

Foix, A., the determination of molecular weight by means of osmotic pressure, A., ii, 621.

the action of diamond on carbon monoxide, A., ii, 641.

the composition and calorific power of coal from the deeper strata of the Kenadza (Algerian) mine, A., ii, 713.

See also Joseph Auguste Foix, A. Muller.

Fokker, A. D., stationary electron vibrations without radiation resistance, A., ii, 106.

electronic theory of the interior of the atom, A., ii, 137.

Folin, Otto, colorimetric estimation of the amino-acid nitrogen in normal urine, A., ii, 536.

the necessity of checking the quality of sodium tungstate used in the system of blood analysis, A., ii, 596.

Folin, Otto [with Hsien Wu], a system of blood analysis. Suppl. III. A new colorimetric method for estimation of the amino-acid nitrogen in blood, A., ii, 540.

Folin, Otto, and Hilding Berglund, the transportation, retention, and excretion of carbohydrates. A., i, 487. retention and distribution of amino-acids with especial reference

to the urea formation, A., i, 702. a colorimetric method for the estimation of sugars in normal human

urine, A., ii, 400.
Folin, Otto, and Joseph M. Looney, colorimetric methods for the separate estimation of tyrosine, tryptophan, and cystine in proteins, A., ii, 539.

Folkoff, Caspar. See A. J. Schaffer. Fontell, Nils. See Ossian Aschan.

Fontés, G., and L. Thivolle, microestimation of lactose by means of potassium permanganate; application to milk, A., ii, **3**23.

Foote, Paul D., W. F. Meggers, and Fred L. Mohler, excitation of the enhanced spectrum of magnesium in a low voltage arc, A., ii, 4.

the excitation of the enhanced spectra

of sodium and potassium in a low voltage arc, A., ii, 598. Foote, Paul D., and Fred L. Mohler, the significance of the half terms in

spectral series formulæ, A., ii, 410. Forbes, George Shannon, and Harriet Isabelle Cole, solubility of silver chloride in dilute chloride solutions and the existence of complex argentichloride ions. II., A., ii, 291.

Forbes, George Shannon. Howard Wilmot Estill, and Osman James Walker, induction periods in reactions between thiosulphate and arsenite or arsenate; a useful clock reaction, A., ii, 271.

Forbes, H. S., and Louise Hompe, the effect of carbon monoxide, illuminating gas, and benzene on blood coagu-

lation time, A., i, 483.

Ford, G. Winifred. See John L. Haughton.

Foresti, B., preparation and mechanism of formation of phenanthroxazine, A., i, 1062.

so-called di-9:10-monohydroxyphenanthrylamine suggested as a reagent for nitric acid and phenanthroxazine. A., ii, 524.

Forrer, Max, the physico-chemical study of the lead chamber process, A., ii, 761.

Forssman, J., effect of ether on antisubstances, A., i, 964.

Forster, Aquila, and William Coulson, nitro-derivatives of m-nitrodimethylaniline, T., 1988.

Forster, Martin Onslow, and William Bristow Saville, constitution of picrorocellin, a diketopiperazine derivative from Roccella fuciformis, T., 816.

the triazo-group. XXII. Cinnamic acid chlorohydrin and its conversion into α-triazo-β-hydroxy-β-phenylpropionic acid, T., 2595.

Forsyth, J. A. C. See P. J. Cammidge.

Fosse. Robert, the synthesis of a nitrogenous principle of plants. hydrocyanic acid, by the oxidation of ammonia and carbohydrates, glycerol, or formaldehyde, A., i, 117.

Fosse, Robert, and A. Hieulle, synthesis of hydrocyanic acid by oxidation, in ammoniacal silver solution, of alcohols, phenols, and amines, A., i, 117.

aptitude of formaldehyde to form hydrocyanic acid by oxidation in ammoniacal silver solutions, A., i, 523.

Foster, A. L. See De Witt Neighbors. Foster, Dorothy Lilian, and Dorothy Mary Moyle, the interconversion of carbohydrate and lactic acid in muscle, A., i, 398.

Foster, H. E. See J. B. Ayer. Foulk, C. W., and Samuel Morris, comparative values of different specimens of iodine for use in chemical measurements, A., ii, 310.

- Fourneau, Ernest, and José Puyal, the amino-alcohols; homologues of novocaine, A., i, 639.
- Fournier, Louis, and L. Guénot, treatment of syphilis by bismuth, A., i, 301.
- Fournier, Louis, L. Guénot, and A. Schwartz, first results of the treatment of syphilis by sodium p-hydroxym-aminophenylarsinate or "189," A., i, 300.
- Fowler, R. H. See Francis William Aston.
- Fox, Francis William. See John Addyman Gardner.
- Foxwell, G. E., thermal dissociation of ammonia with special reference to coke oven conditions, A., ii, 431.
- Fränkel, Sigmund, and Emil Feldsberg, a new function of the tryptic ferment (anhydrase) and the preparation of d-tyrosine anhydride and d-tryptophan anhydride from the products of tryptic digestion, A., i, 184.
- Fränkel, Sigmund, and Oskar Gilbert, lipoids. XVIII. The preparation of phosphosulphatides from brain, A., i, 294.
- Fränkel, Sigmund, and Josef Hager, vitamins. II. Acceleration of fermentation by extracts of animal organs, A., i, 409.
- Fränkel, Sigmund, and Paul Jellinek, products of prolonged tryptic digestion of casein, A., i, 965.
- Fränkel, Sigmund, and Artur Käsz, lipoids. XIX. A lecithin from human brain, A., i, 294.
- Fränkel, Sigmund, and Albert Scharf, vitamins. III. Acceleration of fermentation by extracts of plants and the action of choline and aminoethyl alcohol on fermentation, A., i, 409.
 - vitamins. IV. The adsorption of
 - vitamins, A., i, 409. vitamins. V. Further experiments on the chemistry of vitamins, A., i, 409.
- Frankel, Walter, the recrystallisation of pure mechanically unworked gold, obtained by solidification from the fused mass. A., ii, 778.
- Fraenkel, Walter. See also Richard Lorenz.
- France, Wesley G. See Alfred L. Ferguson.
- Francis, Francis Ernest [with John Clifford Pope, and Reginald Henry Coysh], the composition of paraffin wax. I., T., 496.

- Francis, Francis Ernest, Cyril Mercer Watkins, and Reginald Wilfred Wallington, the composition of paraffin wax. II. and III., T., 1529, 2804.
- Franck, J., the broadening of spectral lines, A., ii, 241.
 - lines, A., ii, 241.

 the theory of Klein and Rosseland applied to fluorescence, photo-chemical processes, and the electron emission from hot substances, A., ii, 464.
- resonance and ionisation potentials of helium, A., ii, 811.
- Franck, J., and Walter Grotrian, the absorption of mercury vapour, A., ii, 728
- Franck, J. See also G. Cario.
- François, Maurice, estimation of mercury in the mercurial pills of the [French] codex, A., ii, 87.
- François, Maurice, and Louis Gaston Blanc, preparation of the alkaloidal mercuri-iodides in crystalline form, A., i, 851.
 - preparation of the alkaloidal bismuthic iodides in a crystalline form, A., i, 851.
- François, Maurice, and Ch. Lormand, the photography of opaque crystals, A., ii, 127.
 - stereoscopic photography of crystals, A., ii, 127.
- François, Maurice, and Émile Luce, analysis of camphor preparations, A., ii, 667.
- Franke, Adolf, and Gerald Groeger, action of a-bromoisobutaldehyde on sodiomalonic ester, A., i, 808.
- Franke, Elizabeth. See Stanley Rossiter Benedict.
- Frankenthal, Käte. See Martin Jacoby. Franklin, Edward Curtis, ammono-carbonic acids, A., i, 440.
- Franzen, Hartwig, a shaking machine for large quantities of fluid, A., ii, 759.
- Franzen, Hartwig, and Fritz Helwert, the chemical constituents of green plants. XX. The acids of the cherry (Prunus avium), A., i, 1102.
- (Prunus avium), A., i, 1102.

 Franzen, Hartwig, and Ernst Keyssner, the chemical constituents of plants. XVII. The presence of lactic acid in the leaves of the blackberry (Rubus fructicosus), A., i, 310.
- Franzen, Hartwig, and Rudolf Ostertag, the chemical constituents of green plants. XVIII. The acids from the berry of the mountain ash (Pyrus aucuparia) which are precipitated by lead acetate, A., i, 616.

Franzen, Hartwig, and Rudolf Ostertag, chemical constituents of green plants. XXI. The non-existence of Crassulacæ

malic acid, A., i, 1223.

Franzen, Hartwig, and Eugen Schumacher, the chemical constituents of green plants. XIV. The acids in the currant (Ribes rubrum) which are precipitated by lead acetate, A., i, 310.

Franzen, Hartwig, and Gustav Stäuble, influence of substituents on reactions. VII. The preferential points of substitution in the naphthols and in anaph.

thylamine, A., i, 450.

Franzen, Hartwig, and Emmi Stern, the chemical constituents of green plants. XV. The presence of lactic acid in the leaves of the raspberry (Rubus idæus), A., i, 311.

chemical constituents of green plants. XIX. Occurrence of lactic acid and succinic acid in the leaves of the raspberry (Rubus idæus), A., i, 975.

Fraps, George Stromach, relation of the phosphoric acid of the soil to pot experiments, A., i, 616.

Fraser, Ronald, the constitution of benzene, T., 188.

Frassineti, Mario. See Luigi Rolla.

Frazer, Joseph Christie Whitney. See Paul Lotz.

Fred, Edwin Brown, W. H. Peterson, and J. J. Anderson, characteristics of certain pentose-destroying bacteria, especially as concerns their action on arabinose and xylose, A., i, 201.

Fred, Edwin Broun. See also O. R. Brunkow, and W. H. Peterson.

Fredenhagen, Karl, theory of the electrolytic ionic condition and the calculation of the electrolytic solution constants, and of the related quantities from the chemical relationships, A., ii, 112.

Freeman, Benjamin. See Howard Waters Doughty.

Freeth, F. A., system Na₂O-CO₂-NaCl-H₂O, considered as two four-component systems, A., ii, 627.

Freise, R. See Hermann Steudel.

Fréjacques, M. See Camille Matignon. Fresenius, Ludwig. See Otto Lemmermann.

Fresenius, Withelm, and Leo Grunhüt, estimation of tannin and colouring matters in wines, A., ii, 96.

detection of formic acid in wine, A., ii,

Freudenberg, Ernst, and Paul György, fixation of lime by animal tissues. III.—VIII., A., i, 87, 291, 299, 608.

Freudenberg, Karl, catechin, A., i, 756.

Freudenberg, Karl, Otto Böhme, and Ludwig Purrmann, tannins and similar compounds. IX. Stereoisomeric catechins. II., A., i, 756.

chins. II., A., i, 756.

Freudenberg, Karl, and Fritz Brauns,
the configuration of the simple
a-hydroxy-acids, A. i, 623.

a-hydroxy-acids, A. i, 623. acetone sugars. I. Transformations of diacetoneglucose, A., i, 1117.

diacetoneglucose, A., i, 1117.

Freudenberg, Karl, and Otto Ivers, syntheses of mixed acylated halogen sugars, A., i, 523.

Freudenberg, Karl, and Ludwig Orthner, reduction of flavanone, A., i, 757.

Freudenberg, Karl, and Withelm Scilasi, tannins and similar substances. II. Chinese tannin, A., i, 1169.

Freudenberg, Karl, and Olof Svanberg, acetone sugars. II. Diacetonexylose, A., i, 1116.

Freudenberg, Karl, and Erich Vollbrecht, tannase, A., i, 285.

tannins and similar compounds. X. The tannin of the native oak, A., i, 1046.

Freuler, A. See W. D. Treadwell. Freund, M. See Paul Jacobsen. Freund, Walter. See Fritz Mayer.

Freundler. See Gabriel Bertrand. Freundler, P., (Mlle) Y. Menager, and (Mlle) Y. Laurent, iodine in the Laminaria, A., i, 98.

the composition of the Laminaria, A., i, 98.

Freundlich, Herbert, concentration and potential fall at boundary surfaces, A., ii, 19.

effective potential difference of electroosmosis and allied phenomena, A., ii, 189.

Freundlich, Herbert, and R. Bartels, kinetics of reactions in which halogen atoms pass from the inner sphere of activity to the outer, A., ii, 489.

Freundlich, Herbert, and A. Gyemant, thermodynamic and electrokinetic potential difference at the surface of two liquids, A., ii, 342.

Freundlich, Herbert, and E. Loening, the protective and flocculating action of hydrophilic colloids and hydrophobic sols, A., ii, 356. behaviour of Carey Lea's silver sol

towards electrolytes and hydrophilic

colloids, A., ii, 696.

Freundlich, Herbert, and P. Scholz, flocculation by mixtures of electrolytes, A., ii, 828.

hydrophobic and hydrophilic sols of sulphur, A., ii, 841.

Freundlich, Leo. See Siegfried Skraup.

Fricke, Hugo. See William Duane.

Fricke, Robert, the analytical detection and differentiation of acetaldehyde, aldol, glyoxylic acid, and their presence in the urine of diabetic patients, A., i, 300.

the presence of pyruvic acid in normal and diabetic urines, A., i, 495.

use of the "silver method" in the estimation of acetaldebyde; its application in the estimation of other aldehydes; a convenient method of accumulation of aldehyde and other volatile substances from body fluids, A., ii, 326.

the detection of aldol in the urine of diabetic patients, A., ii, 326.

energy principle of the coagulation of colloids, particularly of the thermokinetic mechanism, A., ii, 484.

glass suspensions produced by rubbing glass walls with glass rods, A., ii, 692, 744.

Fricke, Robert. See also WilhelmStepp.

Fricker, Kurt. See Hermann Leuchs. Frieber, Walther, formation of indole, and indole reactions; behaviour of indole-negative bacteria, A., i, 901.

Friedberg, Eduard, quantitative measurement of the transient excretion of caffeine in man by a new biological method, A., i, 88.

Friedebach, M. See H. P. Kaufmann. Friedel, Georges, and L. Royer, mixtures of anisotropic liquids and the identity of Grandjean's stratified liquids with liquids of the azoxyphenetole type, A., ii, 129.

Friedemann, W. G., nitrogen distribution of proteins extracted by 0.2 per cent. sodium hydroxide solution from cotton-seed meal, the soja bean, and the coconut, A., i, 505.

Friedländer, Paul, the dyes from Purpura aperta and Purpura lapillus, A., i, 793.

Friedländer, Paul, Walter Herzog, and G. von Voss, indigoid dyes of the phenanthrene and indene series, A., i, 764.

Friedländer, Paul, S. Karamessinis, and O. Schenk, certain chloronaphthalene derivatives, A., i, 244.
Friedländer, Paul, and K. Kunz, 1:1'-

diphenylindigotin, A., i, 765.

Friedrich, Alfred. See Alois Zinke. Friedrich, Walter. See Julius Meyer, and Robert Schwarz.

Friend, Herman, clinical method for the estimation of chlorides in blood, A., ii, 389.

Friend, John Albert Newton, lecture experiment; protective colloids, A., ii, 267.

Friend, John Albert Newton, and John Horace Dennett, the rate of solution of iron in dilute sulphuric acid both when stationary and under rotation,

Friend, John Albert Newton, and Reece Henry Vallance, the influence of protective colloids on the corrosion of metals and on the velocity of chemical and physical change, T., 466.

Fries, Karl, 1:2-naphthaquinols, A., i, 42.

Fries, Karl, and H. Hasenjäger, the course of the reaction in the synthesis oxindigo (2:2'-diketo- $\Delta^{1:1'}$ -dicoumaran), A., i, 45.
Fries, Karl, and F. Kerkow, linear

benzonaphtha-p-thiazine [88-naph-

thaphenthiazine], A., i, 577.

Fries, Karl, and H. Leue, autoxidation of 2-acetyl-a-naphthol in alkaline solution, A., i, 462.

Fries, Karl, and W. Lohmann, the 2-methylnaphthalene series, A., i,

Frister, Fritz. See Otto Dimroth. Fritsch, Albert. See Albin Kurtenacker.

Fritschi, J. See Hermann Staudinger. Fritzmann, E., preparation of hydrocyanic acid in large quantities in the laboratory, A., i, 1128.

Fritzmann, E., and K. Macjulevitsch, new method for estimating volatile substances in air, A., ii, 877.

Froboese, Käthe. See Victor Froboese. Froboese, Victor, and Käthe Froboese, estimation of aluminium in tungsten, A., ii, 397.

Frölich, Per. See Sven Bodforss.

Froelicher, Victor, and Julius Berend Cohen, the nitro- and amino-derivatives of o- and p-methoxybenzoic acids and of a- and B-methoxynaphthoic acids, T., 1652.

Froeschl, Norbert. See Ernst Philippi. Frog, F., and S. Schmidt-Nielsen, fatty acids of butter, A., i, 494.

Froidevaux, J., the estimation of ammoniacal nitrogen in nitrogenous organic substances, and particularly in proteins and their products of

decomposition, A., ii, 454.

Fromherz, Konrad, the action of different groups of local anæsthetics, A., i, 705.

Fromholdt and Nersessov, pigment metabolism. I. and II., A., 404.

Fromm, Emil, ring closure with hydrazinedicarbonamides containing sulphur; dithiourazole and iminothiourazole,

A., i, 62. Fromm, Emil [with Hermann Wenzl], syntheses from cyanamide; preparation of thiocarbamine cyanides, carbamine cyanides, and biurets, A., i, 437.

Fromm, Emil, and Ernst Honold, synthesis with cyanamide; cyanamido ethyl alcohol and guanidoethyl

alcohol, A., i, 529.

Fromm, Emil, Erich Kayser, Karl Briegleb, and Erich Föhrenbach, disulphides with neighbouring single and multiple linkings; syntheses of triazoles and thiodiazoles, A., i, 377. Fromm, Emil, and Erich Siebert, de-

rivatives of dithioethylene and dithioacetylene and the additive capacity of multiple bonds, A., i, 542.

Fuchs, August, melting point tubes as reaction vessels, A., ii, 759.

Fuchs, Berthold. See Siegfried Edlbacher.

Fuchs, Edgar. See Percy Brigl.

Fuchs, Friedrich, anhydrides of N-carb-

oxylic acid, A., i, 1152. Fuchs, Francis J. See James Kendall. Fuchs, Karl. See Ernst Späth.

Fuchs, Walter, [tautomerism of resorcinol], A., i, 336.

Fuchs, Walter, and Heinrich Metzl, the Wurtz-Fittig synthesis, A., i,

Fuchs, Walter, and Walter Stix, tautomerism of phenols. V. 1:5- and 2:7dihydroxynaphthalenes, A., i, 451.

Füchtbauer, Chr., and C. Joos, intensity and broadening of spectrum lines, A., ii, 242.

Fühner, Hermann, the effective strengths of narcotics. I. Experiments on the isolated frog's heart, A., i, 199. the toxicology of arsine. II., A., i,

499. Fürth, Adolf, strength of hypoiodous acid, A., ii, 281. Fürth, L. See F. Erdstein.

Fürth, Otto von, pressure of carbon dioxide or swelling of protein as the cause of muscle contraction, A., i,

Fürth, Otto von, and Walter Fleischmann, the tyrosine content of pro-

teins, A., i, 406.
Fürth, Otto von, and Fritz Lieben, colorimetric experiments on trypto-phan. VI. The tryptophan content of some foods and the tryptophan requirement of men, A., i, 293.

Fürth, Otto von, and Fritz Lieben. decomposition of lactic acid by yeast and by blood-cells, A., i, 502.

further experiments on the destruction of lactic acid by yeast, A., i, 1219.

Fujibayashi, Totaro, preparation of metals by Goldschmidt's aluminothermic method. I., A., ii, 647.

Fujita, Atsushi. See Yasuhiko Asahina. Fukuda, Mitsuharu, absorption of light by sulphur at various temperatures, A., ii, 728.

Fukuda, Mitsuharu. See also Masamichi Kimura.

Fukushima, Kanshi, glycolytic action of leucocytes. I., A., i, 697.

Fulda, H. L. See Paul Jacobsen.

Fuldner. See Otto Diels.

Fuller, Everett W. See Robert E. Wilson. Funck, Albert, the theory of bloodclotting, A., i, 290.

Funck, Albert. See also B. Stuber.

Funk, Casimir, and Harry E. Dubin, vitamin requirements of certain yeasts and bacteria, A., i, 203.

Funk, Eberhard, the influence of cobaltammines on the action of catalase and amylase, A., i, 481.

Funk, Herbert. See Wilhelm Manchot. Funke, G. L., influence of hydrogen-ion concentration on the action of the amylase of Aspergillus niger, A., i, 796.

Futtermenger, A. See Karl Feist. Fyfe, Alexander Walker, and British Dyestuffs Corporation, Ltd., preparation of 1-chloro-2-aminoanthraquinone, A., i, 260.

G.

Gadais, L., estimation of sulphur in pyrites, A., ii, 79.

Gadamer, Johannes, and F. von Bruchhausen, the constitution of corydaline, A., i, 675.

Gadamer, Johannes, and Carl John, ecgonine, A., i, 167, 675.

Gad-Andresen, Knud L., a micro-method for the estimation of ammonia in blood and in organic fluids, A., ii, 523.

a micro-urease method for the estimation of urea in blood, secretions, and tissues, A., ii, 536.

Gailey, Zolia Jencks. See Hermann V. Tartar.

Gainey, P. L., and H. W. Batchelor, influence of hydrogen-ion [concentration] on the growth of Azotobacter, A., i, 1096.

Galanos, S. See K. Pfizenmaier.

Galbraith, William Lyle. See William Lewcock.

Gale, William A. See Ebenezer Henry Archibald.

Galizzi, A. See Giacomo Luigi Ciami-

Gallagher, Patrick Hugh, phototropy and photoelectric effect, A., ii, 11.

Gallagher, Patrick Hugh. See also Charles Moureu.

Gamble, C. J., and Margaret C. Herrick, the utilisation of dextrose by the tubercle baccillus, A., i, 902.

Gamble, James L., carbonic acid and

bicarbonate in urine, A., i, 494. Gammal, C. A. See M. C. Taylor.

Gams, Alphonse, and O. Kaiser, benzyl ester of 2-phenylquinoline-4-carboxylic acid, A., i, 51.

Ganassini, Domenico, [detection of]

quinotoxine in quinine salts, A., ii, 539.

rapid detection of bismuth in urine and in saliva, A., ii, 590.

Ganguly, Kanai Lal, attempted synthesis of norpinic acid, A., i, 1153.

Ganguly, Phani Bhusan, and B. C. Banerji, effect of surface tension, A., ii, 821.

Ganguly, Phani Bhusan, and Nilratan Dhar, coagulation of colloids by sunlight, A., ii, 604.

coagulation of manganese dioxide sol by different electrolytes, A., ii, 829.

García Banús, Antonio, and Juan Ferrer Tomás, derivatives of aminodiphenyl, A., i, 333.

García Banús, Antonio, and J. Pascual Vila, organomagnesium derivatives, A., i, 734.

Gardner, John Addyman, and Francis William Fox, origin and destiny of cholesterol in the animal organism. XII. The excretion of sterols in man, A., i, 89.

origin and destiny of cholesterol in the animal organism. XIII. The autolysis of liver and spleen, A., i, 790.

Gardner, John Addyman, George King, and Edwin Booth Powers, the respiratory exchange in fresh-water fish. III. Gold fish, A., i, 1084.

Garmendia, T. See Obdulio Fernández. Garner, Frederic Horace. See W. F. Faragher.

Garner, V. C. See E. Weiss. Garner, William Edward, the Dushman equation for the velocity of a uni-molecular reaction, A., ii, 358. and non-polar valency polar

organic compounds, A., ii, 758.

Garner, William Edward, and Douglas Norman Jackman, note on the effect of a magnetic field on catalysis by ions in the presence of a paramagnetic salt, T., 1298.

Garner, William Edward, and Kichimatsu Matsuno, the explosion of acetylene and nitrogen. II., T., 1729.

Garner, William Edward, and C. A. Waters, apparatus for electrometric titration, A., ii, 862.

Garrault, (Mlle) H. See E. Fauré-Fremiet.

Garreau, (Mlle) Y., colorimetry, A., ii, 518.

Gastaldi, Carlo, condensation of aceto-phenone. III., A., i, 367. 4:6-diphenyl-2-methylpyridine, A., i,

2:4-diphenylpyridine, A., i, 679.

preparation of methylenecitric acid, A., i, 809.

Gastaldi, Carlo, and G. Braunizer, bisulphite compounds of oximinoketones and glyoximes, A., i, 626.

Gattefossé, Jean, essential oils from Tonkin and Annam, A., i, 1167.

Gaubert, Paul, recrystallisation produced by annealing, A., ii, 35. liquid crystals of calcium phosphate, A., ii, 445.

Gault, Henri, and R. Guillemet, the chlorination of n-butyl alcohol, A., i,

Gault, Henri, and T. Salomon, the aalkyl-levulic acids, A., i, 427.

the methylalkylpyridazinonecarboxylic esters, A., i, 873.

Gault, Henri, and R. Weick, ethyl phenylpyruvate, A., i, 1024.

Gaunt, R. See Carl Hamilton Brown-

Gaviati, A., and T. Pavolini, reduction reactions in the urine of patients treated with arsenobenzenes, A., i, 496.

Gavron, Joseph L. See George W. Raiziss.

Gay, L., distillation and rectification, A., ii, 120.

Geelmuyden, H. Chr., the rôle of ketonic compounds in intermediate exchanges and in the formation of sugar from fat, A., i, 607. Gehlhoff, Georg, relationship between

heat of solution and heat of fusion of organic substances, A., ii, 121.

Gehrcke, Ernst, attempt [to find] a physical basis for atomic radiation, A., ii, 209.

Gehrcke, Ernst, and E. Lau, the change. able fine structure of the Balmer series, A., ii, 3.

Gehroke, Ernst, and E. Lau, the Balmer series of hydrogen, A., ii, 726.

Gehring, A., estimation of humus by oxidation with chromic acid, A., ii, 592.

Gehrke, Max. See Burckhardt Helferich.

Geiger, E., and Otto Loewi, change of choline content of the frog's musculature through electric stimulation, A., i, 492.

Geiger, Hans, and W. Bothe, scattering of β-rays by thin metal sheets, A., ii, 13.

Geiger, Hans, and A. Werner, luminous path of a-rays in crystals, A., ii, 183.

Geith, R., estimation of small quantities of sodium in aluminium and alumina, A., ii, 720.

Gelissen, H. C. J. H., Golodetz's reaction (the benzoyl peroxide reaction), A., ii, 460.

Geller, Hanns. See Walther Schrauth, and Georg Schroeter.

Geloso, Max, the adsorption of iron by precipitates of manganese dioxide, A., ii, 589.

Geloso, Max. See also Paul Nicolardot. General Electric Co., Ltd., London, Research Staff, the disappearance of gas in the electric discharge. IV., A., ii, 417.

A., ii, 417.

General Electric Co., Ltd., London,
Research Staff, [by Colin James
Smithells], reduction of thorium oxide
by metallic tungsten, T., 2236.

Gennari, Marcella. See Ernesto Puxeddu.

Gentle, Joseph Alfred Hector Roberts. See Nevil Vincent Sidgwick.

George, E. F., absorption of light by inorganic salts, A., ii, 806.

Gérald, Pierre. See Charles Dufraisse. Gérard, G., estimation of small amounts of albumin in urine, A., ii, 670.

Gerard, R. W., intestinal intoxication.

I. The presence and significance of histamine in an obstructed bowel, A., i, 790.

Gericke, W. F., differences effected in the protein content of grain by applications of nitrogen made at different growing periods of the plant, A., i, 1226.

Gerke, Roscoe H., temperature coefficient of electromotive force of galvanic cells and the entropy of reactions, A., ii, 682.

Gerlach, Adolf. See William Küster. Gerlach, Walter, investigation of crystal space lattices by means of Röntgen rays; a simple Röntgen tube, A., ii, 36. Gerlach, Walter, the Ka doublet, with new determinations of the lattice constants of some crystals, A., ii, 265.

Gerlach, Walter, and Erich Koch, a new method of absorption spectroscopy, A., ii, 330.

Germann, Frank E. E., adsorption of radium by barium sulphate, A., ii, 16.

new hydrate of uranyl nitrate, A., ii, 649.

Germann, Frank E. E., and Ralph N. Traxler, adsorption of iodine by silver iodide, A., ii, 371.

Germs, H. C. See Frans Maurits Jaeger.

Gersdorff, Charles E. F. See Carl Oscar Johns, and David Breese Jones.

Gersdorff, W. A. See M. C. Taylor.

Gesellschaft für Teerverwertung m.b. H., and Rudolf Weissgerber, preparation of thionaphthensulphonic acid, A., i, 1172.

Gesellschaft für Teerverwertung m.b. H., Rudolf Weissgerber, and Otto Kruber, preparation of thionaphthencarboxylic acids, A., i, 567.

Gessner, H. See Georg Wiegner.

Getman, Frederick Hutton, spectrophotometric study of solutions of cupric chloride, A., ii, 411. absorption of light by solutions of

absorption of light by solutions of cupric lithium chloride, A., ii, 412. Gettler, Alexander O., and J. W. Jack-

Gettler, Alexander O., and J. W. Jackson, preparation of colloidal gold solution for testing spinal fluid, A., ii, 240.

Ghosh, Jnanendra Chandra, a general theory of solutions of electrolytes, A., ii, 125.

Giaja, Jean, decomposition of amygdalin from the point of view of conjugated fermentation, A., i, 185.

Gibbs, Harry Drake. See Courtney Conover.

Gibbs, R. C. See William Ridgely Orndorff.

Gibson, Charles Stanley, and Patrick Playfair Laidlaw, chloroform in the blood after death, A., i, 1218.

Gibson, George Ernest, and William Albert Noyes, jun., luminous discharge in hydrogen and mercury and a new method of measuring ionisation potentials, A., ii, 812.

Gibson, Robert B., and C. P. Howard, alcaptonuria and its metabolism, A., i, 401.

Gibson, Robert B., and Frances T.

Martin, creatine formation in a case
of progressive pseudo-hypertrophic
muscular dystrophy, A., i, 300.

bson, William Howieson, (Miss) Rebecca Duckham, and (Miss) Ruth Gibson, Fairbairn, the products of nitration of toluene, T., 270.

Gicklhorn, Jos., microchemistry of a new group of purple bacteria, A., i,

303.

Gila Esteban, F. See Santiago Piña de Rubies.

Gilbert, Lionel Felix, Harold Buckley, and James Irvine Orme Masson, the system chromium trioxide-sulphur trioxide-water, T., 1934. Gilbert, Oskar. See Sigmund Fränkel.

Gilfillan, François A., catalysis. II. Dehydration and additive reactions of ethyl alcohol; the formation of acetal and mercaptans, A., i, 709.

Gillespie, Louis J., colour standards for colorimetric measurement hydrogen-ion concentration, A., ii,

157.

Gillespie, Louis J. See also Frederick G. Keyes.

Gillet, Alfred, bivalent carbon, A., i, 213. some compounds of bivalent carbon,

A., i, 513.

Gillis, J., chemical passivity of metals, A., ii, 814.

Gillot, P., the changes and movements of the saccharine materials in Mercuriale vivace (Mercurialis perennis, L.) in the course of its annual growth, A., i, 1101.

Gilmour, George van Barneveld, the constitution and rotatory powers of mannitol and fructose complexes formed in solutions containing boric acid and sodium hydroxide, T., 1333.

Gilmour, Hugh. See Gilbert Thomas Morgan.

Gilmour, Robert, vapour pressure of

acetaldehyde, A., i, 918. Gilta, G., the crystalline form of atoxvl

[sodium p-aminophenylarsinate], A., i, 961. Giral Pereira, José, new insoluble organic

nitrates, A., ii, 523. Gire, G., the dissociation of barium

platinichloride, A., ii, 551. Gisler, M. See Paul Karrer.

Giua, Michele, oxidation of the trinitroxylenes, A., i, 534.

additive compounds of s.-trinitroanisole with tertiary bases, A., i,

a new red quinoline colouring matter, A., i, 681.

action of certain hydrazines and of pyridine on 5-bromo-1:2:4-trinitro-benzene, A., i, 691.

Giua, Michele, and A. Angeletti, action of certain primary bases on 5-bromo-1:2:4-trinitrobenzene, A., i, 649. Givaudan, L., & Co. See W. C. Sievers.

Glässner, Karl, a new method for the estimation of pepsin, A., ii, 406.

Glagoleva, Alexandra Alexandrovna.

See Nicolai Antonovich Pushin.
Glasenapp, M. von, colloidal calcium hydroxide, A., ii, 848.

Glaser, L. C., the spectrum of glucinum and its noteworthy relation to the spectrum of aluminium, A., ii, 675.

Glasson, J. L., beta rays and atomic number, A., ii, 183.

stopping power and atomic number, A., ii, 250.

Glasstone, Samuel, physical chemistry of the oxides of lead. III. Hydrated lead monoxide, T., 58.

physical chemistry of the oxides of IV. Red lead and lead lead. sesquioxide, T., 1456.

physical chemistry of the oxides of lead. V. The electromotive behaviour of lead dioxide, T., 1469.

physical chemistry of the oxides of lead. VI. The anodic behaviour of lead and lead dioxide, T., 2091.

Glattfield, John W. E., and Frank V. Sander, the C₄-saccharinic acids. II. The preparation and resolution of dl- $\alpha\gamma$ -dihydroxybutyric acid; some derivatives of the optically active acids, A., i, 318.

Glattfield, John W. E., and Edgar Wertheim, the preparation of optically active hydrazines. II. The preparation of dl-p-sec. -butylphenylhydrazine; the resolution of dl-p-sec. butylaniline, A., i, 385.

Gleditsch, (Mlle) Ellen, and B. Samdahl, the atomic weight of the chlorine in an ancient mineral, apatite, from Balme, A., ii, 281.

Glew, F. Harrison, radium synthesis of carbon compounds from air, A., ii, 607. Glover, C. C. See H. W. Valteich.

Gluud, Wilhelm, copper sulphide, A., ii, 446.

the structural formula of copper sulphide, A., ii, 572.

Godchot, Marcel, and Pierre Bédos, cyclohexene oxide and o-methylcyclo-

hexanol, A., i, 334. Godchot, Marcel, and Pierre Brun, some derivatives of suberone, A., i, 350.

Goddard, Archibald Edwin, organoderivatives of thallium. III. Some thalliumdialkyl salts and the preparation of thalliumdiaryl haloids, T.,

Archibald Edwin, JuliusGoddard. Nicholsonand Richard Ashley, Bromley Evans, organo-derivatives of tin and lead. I. Application of lead and tin tetraphenyls in the preparation of organo-metallic compounds, T., 978.

Goddard, Archibald Edwin, and (Mrs.) Dorothy Goddard, organo-derivatives of thallium. V. The preparation of thallium diaryl salts, T., 482.

Goddard, Archibald Edwin, and James Bertram Ward, metallic derivatives of nitrophenolic compounds. IV. Some complex nitrophenoxides of magnesium, silver, and lead, T., 262.

Goddard, Archibald Edwin. See also (Mrs.) Dorothy Goddard.

Goddard, (Mrs.) Dorothy, and Archibald Edwin Goddard, metallic derivatives of nitrophenolic compounds. III. nitrophenoxides of the alkali metals, T., 54.

organo-derivatives of thallium. Action of thallium chlorides on the Grignard reagent and on organoderivatives of tin, lead, and bismuth, T., 256.

Goddard, (Mrs.) Dorothy. See also Archibald Edwin Goddard.

Goebel, Alfred. See Hans Lecher.

Goebel, H., the catalytic hydrogenation of methysticin, A., i, 657.

Goebel, Walter F. See William Albert Noves.

Göggel, Karl, the photoelectric effect of the alkaline-earth phosphors, A., ii, 732.

Göhring, Rudolf, mechanism of the photochemical chlorine-hydrogen gas reaction and the question of the damping of the velocity [of reaction] of chlorine activated by light, A., ii, 9.

Gönke, Tatjana. See Michael A. Rakuzin. Görbitz, Carl. See Heinrich Goldschmidt. Goes, Eduard C. See Hans Heinrich Schlubach.

Götting, H. See H. P. Kaufmann. Goiffon, R., and F. Nepveux, organic

acids in urine, A., i, 1215.

Goldberg, Stephanie, cataphoresis of colloidal carbon, A., ii, 429.

Goldberg, Stephanie. See also Hilary Lachs.

Goldberger, Joseph, and W. F. Tanner, amino-acid deficiency probably the primary etiological factor in pellagra, A., i, 1092.

Goldschmidt, Heinrich, Carl Görbitz, Haakon Hougen, and Kristian Pahle, affinity dimensions of weak acids and bases in alcoholic solution and the alcoholysis of their salts, A., ii, 135.

Goldschmidt, Heinrich, Einar Storm, and Odd Hassel, reduction of nitro-compounds by stannous chloride. III., A., ii, 361,

Goldschmidt, M., lipoids of the crystalline lens, A., i, 489.

Goldschmidt, Stefan, univalent oxygen. I., A., i, 1148.

Goldschmidt, Stefan, and Karl Euler, amine-oxidation. III. Bivalent nitrogen; diarylacylhydrazyls, A., i, 475.

Goldschmidt, Stefan, and Konrad Renn, IV. Bivalent amine-oxidation. aa-diphenyl-\$-trinitronitrogen; phenylhydrazyl, A., i, 476. nine-oxidation. V. Action of tetra-

amine-oxidation. nitromethane on triphenylhydrazine,

A., i, 478.

Goldschmidt, Stefan, and Walter Schmidt, univalent oxygen. II. Phenanthroxyls, A., i, 1149.

Goldschmidt, Stefan, and Ludwig Strohmenger, aromatic chloroamines. II., A., i, 1004.

Stefan, Goldschmidt. $\mathbf{a}\mathbf{n}\mathbf{d}$ Bernard Wurzschmitt, amine - oxidation. VI. Radicles as intermediate stages in chemical reactions, A., i, 1139. amine-oxidation. VII. The oxidation

of aniline, A., i, 1139.

Goldstein, Kurt. See Hans Pringsheim. Gomberg, Moses, and Edgar C. Britton, 2:2'-sulphonidotriphenylmethyl, A., i,

Gomberg, Moses, and C. C. Buchler, benzyl ethers of carbohydrates, A., i, 112.

Gomberg, Moses, and Wesley Minnis.

phenylthioxanthyl, A., i, 163. Gomberg, Moses, and F. W. Sullivan, jun., triphenylmethyl. XXX. Diphenyl-\beta-naphthylmethyl and colour of free radicles, A., i, 929.

González, F. See Enrique Moles. Goode, Kenneth H., continuous reading

electro-titration apparatus, A., ii, 307. Goodhue, Elbridge A. See Roscoe G. Dickenson.

Goodson, Augustus, the con-Johnstituents of the flowering tops of

Artemisia afra. Jacq., A., i, 1099. Goodyear Tire and Rubber Co., preparation of thiocarbamides, A., i, 236.

Goos, Oskar. See Emil Knoevenagel. Gordon, John. See James Walter McLeod. Gordon, Neil E., origin of soil colloids, A., i, 1227.

Gordon, Neil E., and Ebenezer Emmet Reid, solubility of liquids in liquids; the partition of the lower acids, particularly formic, between water and various organic solvents, A., ii, 824.

Gordon, Neil E. and E. B. Starkey, influence of soil colloids on availability

of salts, A., i, 1104. Gordon, Neil E. See also E. B. Starkey.

Gordon, Samuel G., keeleyite, a new lead sulphantimonite from Bolivia, A., ii, 859.

fore, S. N., the "cotton wool plug" test for indole, A., ii, 535.

Goris, A., and P. Costy, preparation and

racemisation of hyoscyamine and its sulphate, A., i, 1174.

urea and urease in fungi, A., i, 1220.

Goris, A., and A. Larsonneau, chemical composition of belladonna leaves, A., i, 1099.

detection of small quantities of pyridine, A., ii, 795.

Goris, A., and A. Liot, the culture of Bacillus pyocyaneus on definite artificial media. A., i, 407. Goris, A., and Ch. Vischniac, essential

oil of violet roots, A., i, 848.

Gorter, K., the precursor of Indianyellow, A., i, 932.

Gortner, Ross Aiken, and Walter F. Hoffman, an interesting colloid gel, A., ii, 130.

Gortner, Ross Aiken. See also Walter F. Hoffman.

Gottlieb-Billroth. Hans. See Kurt Heinrich Meyer.

Gottschaldt, Else. See Otto Mumm.

Gottschalk, A. See Werner Lipschitz. Goudsmit, S., doublets in the visible spectrum, A., ii, 462.

Gouin, A., and P. Andouard, disappearance of nitrogen during digestion, A., i, 698.

Gould, V. L. See Carl S. Marvel.

Gowland, William, obituary notice of, T., 2907.

Goy, S., and E. Wende, the wax of corpses, A., i, 969.

Graaff, C. de. See Jacob Böeseken.

Grab, Max von, pyruvic acid as an intermediary in the alcoholic fission of dextrose, A., i, 306.

Grabner, Alfred, so-called rapic acid, A., i, 519.

Gränacher, Ch., the use of rhodanine in organic syntheses. I. Furylalanine, A., i, 849.

Gränacher, Ch., H. Reis, and E. Pool,

rhodanine. II., A., i, 576. Gränacher, Ch., and P. Schaufelberger, oxidation of aliphatic hydrocarbons with nitrogen peroxide. II., A., i,

Gränacher, Ch. See also Paul Karrer.

Grafe, Eduard, and E. von Redwitz, the function of the thyroid gland in the regulation of temperature and in the metabolism of fever, A., i, 491.

Graham, Hugh, and Alexander Killen Macbeth, the labile nature of the halogen atom in organic compounds. III. The absorption spectra of bromomalonic derivatives and nitroparaffins, and their bearing on the question of an oxygen-halogen linking, T., 1109.

the labile nature of the halogen atom in organic compounds. VII. Absorption spectra of the halogen derivatives of some cyclic compounds, and their bearing on the question of an oxygen-halogen linking, T., 2601.

Graham, Hugh. See also Samuel

Smiles.

Graham, J. J. T., and C. M. Smith, errors caused by nitrates and nitrites in the estimation of arsenic by the distillation method and a means for their prevention, A., ii, 314.

Grainger, Herbert Henry. See Edward

de Barry Barnett.

Gralka, Richard, and Hans Aron, accessory food factors. II. Importance of water-soluble extractives, A., i, 395.

Gram, H. C., fibrinogen content of human blood, A., i, 288.

estimation of the percentage of fibrin in blood and plasma, A., ii, 240. the gradual darkening of hæmatin

solutions in colorimetric estimations, and its prevention, A., ii, 886.

Gram, H. C. See also A. Norgaard. Gramont, (Comte) Arnaud de, and Gustave Adolphe Hemsalech, the evolution of the spectrum of magnesium under the influence of increasing electric fields; applications to astro-physics, A., ii, 243.

Gramont, (Comte) Arnaud de. See also Gustave Adolphe Hemsalech.

Grandchamp, L. See Philippe Malvezin. Grandmougin, Eugène, the homonuclear dibromoanthraquinones, A., i, 43.

the intermediate products in the synthesis of alizarin, A., i, 44.

octabromoindigotin, A., i, 53.

the halogenated indigotins, A., i, 180. sulphobenzide [diphenylsulphone], A.,

some new derivatives of sulphobenzide [diphenylsulphone], A., i, 331.

the halogenated isatins, A., i, 368. the acylated and alkylated leucoindigotins, A., i, 470.

the quindolines, A., i, 584.

Granger, F. S., and John Maurice Nelson, oxidation and reduction of quinol and quinone from the point of view of electromotive force measurements, A., i, 43.

Grantham, G. E., the infra-red absorption spectra of alkali hydroxides, A., ii, 244.

Graser, Johanna. See Richard Willstatter.

See Heinrich Ley. Grau, R.

Gray, H. Le B. See Gurney O. Gutekunst.

Gray, William Herbert. See Robert

George Fargher.

Greaves, Joseph E., E. G. Carter, and Yeppa Lund, influence of salts on azofication in soil, A., i, 976.

Greaves, Joseph E. See also C. T. Hirst.

Grebe, Leonhard, and H. Konen, band spectra of isotopes, A., ii, 4.

Green, Arthur George. See British Dyestuffs Corporation, Ltd.

Green, Stanley Joseph. See British Dyestuffs Corporation, Ltd.

Greene, Herbert, and Robert Robinson, the mechanism of the formation of benzoylbenzoin by treatment of benzoylmandelonitrile with an alcoholic solution of sodium ethoxide, T., 2182.

Greenfield, R. E., and Arthur M. Buswell, investigation, by means of the hydrogen electrode, of the chemical reactions involved in water purification, A., ii, 653.

Greer, Frank E. See Frederick W. Heyl.

Greeske, Hellmuth. See Jakob Meisenheimer.

Gregory, John Walter, ore deposits and their genesis in relation to geographical distribution, T., 750.

Greinacher, Heinrich, luminescence of flame ions in the air spark, A., ii, 250.

Greiner, Irene, the estimation of small quantities of dextrose by Bertrand's process, A., ii, 400.

Greinert, Wilhelm, oxidation of some sugar acids, A., i, 1111.

Grenet, Louis. See Georges Charpy.

Greulich. See G. Meyer.

Greune, H. See Theodor Zincke. Griffin, Roger C., and H. C. Parish, the

penetrability of filter-paper, A., ii, 309.

Griffith, Robert Owen, the hydrolysis of a salt formed from a weak acid and a weak base, A., ii, 420.

Griffiths, Evan Dalton. See Fred Barrow. Grigaut, A., estimation of uric acid in blood, A., ii, 405.

Grigaut, A., and P. Zizine, precipitation of proteins by metaphosphoric acid; application to the analysis of blood, pathological liquids, and cerebrospinal

fluid, A., ii, 886. Grigaut, A. See also A. Chauffard. Griggs, Mary A., alkaline hydrolysis of casein, A., i, 182.

Grignard, Victor, and A. C. Purdy, ab'dichlorodiethyl ether, A., i, 802.

Grim, F. V. See Walter A. Patrick. Grimm, H., ionic properties and crystallochemical relationships. I. The properties of the ions which appear in crystals, A., ii, 127.

Grimm, Hans Georg, isomorphism and ionic structure, A., ii, 483.

structure of the ions of the rare earths. A., ii, 635.

periodic system of the atomic ions, A., ii, 635.

ionic properties and chemical facts.

IV. Lattice energy and the work of ionisation of inorganic compounds, A., ii, 690.

ionic properties and chemical facts. V. Connexion between heat of formation, lattice energy, and the ionic properties, A., ii, 690.

Grimme, Clemens, oil from the seeds of Jatropha curcas, L., A., i, 98.

Grimmel, Harry. See Adolf Windaus. Grinberg, A. A., chemoluminescence. I., A., ii, 806.

Grindley, Harry Sands. See T. S. Hamilton.

Grisard, Gustav. See Franz Fichter. Griszkiewicz-Trochimowski, E., products

of polymerisation of hydrocyanic acid, A., i, 723.

Grobet, Edouard, reactions of sodium hydroxide with salts of aluminium, A., ii, 573.

Grobet, Édouard. See also Paul Dutoit. Groeger, Gerald. See Adolf Franke.

Groenewege, J., the occurrence of emulsion in Saccharomycetes and the existence of a specific enzyme cellobiase, A., i, 903.

denitrification with formates; influ-

ence of the kation, A., i, 971. Groll, J. Temminck, the influence of hydrogen-ion concentration on the action of pancreatic amylase, A., i, 600. Gromelski, B. See G. Leendertz.

Groningen, P. van. See Willem Reinders.

See J. Bougault. Gros, R.

Gross, Erwin G., and Frank Pell Underhill, metabolism of inorganic salts. I. The inorganic-ion balance of the blood in parothyroid tetany, A., i, 1210.

Gross, Paul M. See James Kendall. Gross, R. Eberhard, the protamines, A., i, 784.

new small autoclave for hydrolysis experiments, A., ii, 561.

Grotrian, Walter, the L doublet of neon, A., ii, 179.

Grotrian, Walter. See also J. Franck. Grounds, Arthur, the constitution of anthracite, A., ii, 385.

Grube, Georg, chemical and electro-chemical behaviour of salts of the acids of lead, A., ii. 570.

Gruber, Heinrich. Julius von See Braun.

Grude, Frithjoe. See Paul Askenasy. Grün, Adolf, the constitution of glycerides from the point of view of the

co-ordination theory, A., i, 420. the co-ordination forms of glycerides,

A., i, 621. Grün, Adolf, and Th. Wirth, synthesis of $\Delta\theta$ -decenoic acid, A., i, 804.

 $\Delta \theta$ -decenoic acid, a previously unknown

acid from butter, A., i, 806. Grün, Adolf, and Franz Wittka, preparation and alkyl interchange of cellulose esters; cellulose stearate and laurate, A., i, 114.

Grüneisen, E., and E. Merkel, velocity of sound in air and hydrogen at 0° and 1 atm., A., ii, 190.

Grünhut, Leo, and J. Weber, the action of amino acids on sugars, A., i, 235. Grünhut, Leo. See also Wilhelm Fre-

genius.

Grünstein, Nathan, preparation of aldol from acetaldehyde, A., i, 111. preparation of bultaldehyde and butyl

alcohol from crotonaldehyde, A., i, 112.

Gruyter, C. J. de. See Andreas Smits. Gruzewska, (Mme) Z., action of ferments on laminarin, A., i, 11.

Gudden, B., and Robert Pohl, phosphorescent zinc sulphide containing copper, A., ii, 680.

Guénot, L. See Louis Fournier.

electromotive Günther-Schulze, A., behaviour of aluminium, A., ii, 110.

dependence of the base equilibrium in permutite on the concentration of the surrounding solution, A., ii, 486.

determination of the complex formation in aqueous solutions of copper salts by means of permutite, A., ii, 504.

the dissociation of the chlorides of bivalent metals in aqueous solution, A., ii, 765.

Günzberg, Ludwig, theobromine excretion and theobromine diuresis, A., i, 703.

Guerbet, Marcel, the characterisation of the colouring matter of saffron; its use in investigations relating to laud-

anum poisoning, A., ii, 793.

Guha, Praphulla Chandra, constitution
of the so-called dithiourazole of Martin Freund. I., A., i, 875.

constitution of the so-called dithiourazole of Martin Freund. II. New methods of synthesis, isomerism, and poly-derivatives, A., i, 876.

Guichard, Marcel, a static method of study of hydration, A., ii, 555.

adsorption and its bearing on catalysis, A., ii, 630.

Guild, F. N., identity of flagstaffite with terpin hydrate, A., ii, 76.

Guillaumin, A. J. A. See Louis Jacques Simon.

Guillaumin, Ch. O., estimation of uric acid in blood, A., ii, 170.

estimation of uric acid and urates in blood, A., ii, 796.

estimation and constitution of a fraction of the uric acid in blood, A., ii, 796.

Guillemet, R. See Henri Gault.

Guillet, Léon, the thermal treatment of certain complex aluminium alloys, A., ii, 69.

magnesium-cadmium alloys, A., ii, 570.

the alloys of cerium, A., ii, 572.

Guillet, Léon, and Jean Cournot, the variation of the mechanical properties of metals and alloys at low temperatures, A., ii, 261.

Guinot, Henri. See André Job. Guioth, Jean. See Marcel Sommelet.

Gulbransen, R. See Carl Hamilton

Browning.
Gunkel, L. See Emil Heuser.

Gunnaiya, D. See A. L. Narayan.

Guntz, A. A., phosphorescent zinc sulphide, A., ii, 502.

Gupta, Biraj Mohan, and Jocelyn Field Thorpe, the formation of bromine derivatives of carbon compounds without the production of hydrogen bromide, T., 1896.

Gustafson, A. F., the effect of drying soils on the water-soluble constituents, A., i, 708.

Gustaver, Bror, the adsorption problem; sorption of vapours by charcoal, A.,

Gutbier, Alexander, and E. Dürrwächter. gold sulphides, A., ii, 513.

Gutbier, Alexander, and R. Emslander.

influence of freezing on colloidal selenium. III., A., ii, 283. protecting colloids. XII. Gelatin as protecting colloid. II. Colloidal selenium, A., ii, 625. Gutbier, Alexander, Fr. Heinrich, and

J. Huber, influence of freezing on

colloidal selenium. II., A., ii, 142.
Gutbier, Alexander, and J. Huber,
protective colloids. XI. Carrageen
as a protective colloid. I. General colloid-chemical investigation of the extract of Irish moss, A., ii, 203.

Gutbier, Alexander, J. Huber, and O. Kuppinger, the analytical chemistry of colloidal disperse systems. I. Estimation of silver ion in the presence of colloidal silver, A., ii, 396.

Gutbier, Alexander, J. Huber, and W. Schieber, a rapid dialyser, A., ii, 551. Guthier, Alexander, J. Huber, and A. Zweigle, protective colloids. Gelatin as a protective colloid. I. Colloidal silver, A., ii, 485.

Gutbier, Alexander, and F. Krauss, bromo-salts of ruthenium [ruthenibromides], A., i, 16.

Gutbier, Alexander, and A. Mayer, a simple dialyser, A., ii, 353.

Gutbier, Alexander, E. Sauer, and F. Schelling, action of alum on animal glue, A., i, 783.

Gutbier, Alexander, and K. Staib, estimation of zinc as sulphate, A., ii,

Gutbier, Alexander, A. Wolf, and A. Kiess, protective colloids. XI. Carrageen as protective colloid. Colloidal silver, A., ii, 203.

Gutekunst, Gurney O., and H. Le B. Gray, the 6-alkyloxy-2-methylquinol-

ines, A., i, 950.

Guthrie, Charles Claude, a simplified form of apparatus for air analysis, A., ii, 78.

a gas receiver of convenient and practical form for sampling expired air for analysis, A., ii, 158.

Gutmann, August, action of compounds of nitric oxide and hydroxylamine on tertiary sodium arsenite, A., ii, 844.

Guy, Ruth A., limitations of the modified Lewis-Benedict method of blood sugar

estimation, A., ii, 94.
Guye, Charles Eugène, and R. Rüdy, new method of determining molecular diameters by the electromagnetic rotation of the discharge in gases, A., ii,

Guye, Philippe Auguste, obituary notice of, T., 2909.

Guye, Philippe Auguste, and T. Batuecas. the compressibility at 0° and less than 1 atmosphere and the divergence from Avogadro's law of several gases, A., ii, 617.

Gyemant, A., cataphoresis of water in organic liquids, A., ii, 684.

Gyemant, A. See also Herbert Freundlich.

György, Paul. See Ernst Freudenberg.

H.

Haan, J. de. the glycogen content of white blood corpuscles, A., i, 484.

Haan, J. de, and S. van Creveld, the relation between blood-plasma and tissue fluids, especially the aqueous humour and the cerebrospinal fluid. I. The sugar content and the question of the combined sugar, A., i, 295.

Haar, Anne Wilhelm van der, saponins. V. Hederin and its hederagenin, A., i, 160.

oxydases, A., i, 284. saponins. VII., A., i, 565.

VIII. The saponins from saponins. the leaves of Aralia montana, Bl. [galacturonoid-saponins and their magnesium and calcium salts], A., i, 1168.

Haar, Anne Wilhelm van der, and A. Tamburello, saponins. VI. Hederagenin, A., i, 160.

Haar, J. van der, apparatus for facilitating the estimation of dextrose by titration with permanganate by the Mohr-Bertrand method, A., ii, **790.**

Haas. See Röhm.

Haas, A. R. C. See F. C. Bauer. Haas, (Frl.) E. See Heinrich Wieland. Haber, Fritz, amorphous precipitates and crystalline sols, A., ii, 553.

Haber, Fritz, and W. Zisch, excitation of gas-spectra during chemical reactions, A., ii, 461.

Hackl, Oskar, estimation of very small quantities of arsenic in silicate rocks, A., ii, 159.

detection and estimation of small quantities of nickel and cobalt in silicate rocks, A., ii, 458.

Hackmack, D. See R. Siebeck.

Hadding, Assar, analysis of minerals by the Röntgen spectrograph, A., ii,

the occurrence of germanium in cassiterite, A., ii, 855.

Haefelin, Gerhard. See Paul Pfeiffer.

Haegermann, Gustav. See Richard Lorenz.

Erik, Nils Löfmann, and Hägglund, Eduard Färber, cellulose acetate from wood cellulose, A., i, 323.

Haehn, H. See F. Hayduck, and Georg Schroeter.

Hämäläinen, Reino, a new method for the detection of methyl alcohol, A., ii,

Häuselmann, L. See H. Zschokke. Haffner, F. See Alb. Jodlbauer. Hagen, J. See Fritz Mayer.

Hagenbach, August, and R. Percy, the absorption spectrum of potassium permanganate, A., ii, 600.

Hager, Josef. See Sigmund Fränkel. Haggard, Howard W., and Thomas J. Charlton, the fate of sulphides in the

blood, A., i, 287.

Haggard, Howard W., and Yandell Henderson, influence of hydrogen sulphide on respiration, A., i, 1206.

Haggenmacher. See Emil Baur.

Hagman, Sidney M. See Hjalmar Johansson.

Hahn, Arnold, "double-nitrogen," a diagnostic for endogenous proteinbreakdown, especially for hidden suppuration, A., i, 291.

Hahn, Dorothea von. See Friedrich Vincenz von Hahn.

Hahn, Erich. See Julius von Braun.

Hahn, Friedrich L., still-head for the prevention of spray, A., ii, 368. preparation of green manganous sulph-

ide, A., ii, 380. separation of antimony from arsenic

and tin, A., ii, 877.

Hahn, Friedrich L. [with G. Leimbach, and H. Windisch], contradictions and errors in analytical chemistry. The precipitation of aluminium by thiosulphate and its separation from II. The ageing of volumetric

thiosulphate solutions, A., ii, 873. Hahn, Friedrich L., and G. Leimbach, a peculiar catalytic reaction for the detection and a method for the estimation of the smallest traces of copper [also a lecture experiment],

A., ii, 870.

Hahn, Friedrich Vincenz von, kinetic and static coagulation measurements of suspensoids, A., ii, 37. lphide sols. III. Sol preparation sulphide sols.

by hydrolysis, A., ii, 856.

Hahn, Friedrich Vincenz von, and Dorothea von Hahn, technical sedimentation analysis. I., A., ii, 705. Hahn, Friedrich Vincenz von. See also

Wolfgang Ostwald.

Hahn, Otto, the existence of the new radioactive element uranium-V described by Piccard and Stahel, A., ii,

Hahn, Otto, and Lise Meitner, protactinium content of pitchblende residues and the branching relationship of

the actinium series, A., ii, 185.

Hailer, Ekkehard, the relation between bacteria, spores, and formaldehyde, A., i, 408.
the bactericidal after-effect of form-

aldehyde solutions, A., i, 408.

Hainsworth, William R., and Duncan A. MacInnes, effect of hydrogen pressure on the electromotive force of a hydrogen-calomel cell. I., A., ii, 467.

Hajós, K. See László Karczag. Hakomori, Shin-ichirô, catalytic analyses. I. Estimation of chloric acid,

Ă., ii, 389.

Halban, Heinrich von, and K. Siedentopf, application of photo-electric cells to the measurement of the light absorption in solutions. II., A., ii,

Halberkann, Josef, 5-methoxydioxindole and 5-methoxyisatin, A., i, 172.

derivatives of quinic acid, A., i,

transformation of the diphenyl. phenyl-p'-tolyl-, and di-p'-tolylamides of toluene-p-sulphonic acid, A., i, 1132.

Haley, D. E., and J. F. Lyman, castor bean lipase, its preparation and some of its properties, A., i, 390.

Hall, Archibald John. See Arthur Ernest Everest.

Hall, Claude Haines, jun., electrical precipitation of colloids, A., ii, 555.

estimation of small Hall, Dorothy, amounts of molybdenum in tungsten, A., ii, 660.

Hall, Dorothy. See also Hobart Hurd Willard.

Halla, F., and K. Hirschko, the complex cuprammoniates
Cu(CN)₂,CuCN,2NH₃;

 $Cu(CN)_2$, 4CuCN, $4NH_3$;

Cu(CNS)2, Cu(CN)2, 5CuCN, 6NH3, and the analytical methods for their

identification, A., ii, 768.

Haller, Albin, and Edouard Bauer, syntheses by means of sodamide. IX. The preparation of \$\beta\beta\cdot\delta\rightarrow\drindones or 2:2-dialkylindan-1-ones, A., i, 258.

Haller, Albin, and Eugène Benoist, syntheses by means of sodamide. XI. Substitution derivatives of benzoylcyclopropane, A., i, 350.

Haller, Albin, and Paul Boudin, syntheses by means of sodamide. X. The p-aminobenzylidene- and p-aminobenzyl-camphors and some of their

derivatives, A., i, 356.

Haller, Albin, and (Mme) Pauline Ramart-Lucas, new distinctive characteristics of the three propan-\$-olcamphorcarboxylolides melting respectively at 141°, 117-118°, and 89-90°, A., i, 460. aller, Emma. See Kurt Lindner.

Haller, Emma.

Hallimond, Arthur Francis, [with E. G. Radley], glauconite from Lewes, Sussex; constitution of glauconite, A., ii, 861.

Hallwass, F. See Walther Borsche. standard dropping

Halphen, Hede, star pipette, A., ii, 221.

Hamburger, Hartog Jakob, permeability of the glomerulus membrane for stereoisomeric sugars, with special reference to galactose, 490.

change of permeability with special reference to stereoisomeric sugars,

A., i, 491.

estimation of the relative numbers of red blood-corpuscles of differing resistance (osmotic resistance curves) by means of sodium sulphate, A., i, 606.

the permeability of the glomerulus membrane for stereoisomeric sugars, A., i, 790.

Hamburger, Robert. ErnestSee Zerner.

Hamburger, Rudolf J., the importance of potassium and calcium ions for the production of artificial ædema and for the width of the blood vessels, A., i,

Hamburger, S., preparation of protocatechualdehyde, A., i, 556.

Hamburger-Glazer, Edith. See Heinrich Biltz.

Hamer, (Miss) Frances Mary. See William Hobson Mills.

Hamilton, Cliff S. See W. LeeLewis.

Hamilton, Leicester F. See Waldemar Lindgren.

Hamilton, T. S., W. B. Nevens, and Harry Sands Grindley, estimation of the amino-acids of feeding stuffs, A.,

Hammarsten, Einar, and Erik Jorpes, the "coupled" nucleic acid from the

pancreas. II., A., i, 387. Hammarsten, H., the equilibrium between some organic substances, A., ii. 830.

Hammarsten, Olof, the action of chym-VII. Further exosin and pepsin. periments on the purification of the enzyme of the stomach, A., i, 958. the action of chymosin and pepsin.

VIII. Relative sensitiveness alkali of the stomach enzymes of

the calf and pig, A., i, 958.

Hammett, Frederick S., creatinine and creatine in muscle extracts. III. Concerning the presence of enzymes in muscle tissue which have creatine and creatinine as their substrates, A., i, 1090.

Hammett, Frederick S., and E. Adams, a colorimetric method for the estimation of small amounts of mag-

nesium, A., ii, 587.

Hammett, Frederick S., Joseph E. Nowrey, and John H. Müller, erythropoietic action of germanium dioxide, A., i, 1086.

Hammick, Dalziel Llewellyn, and Alford Reginald Boeree, preparation of atrioxymethylene and a new polymeride of formaldehyde, T., 2738.

Hammick, Dalziel Llewellyn, and George Hazlewood Locket, preparation sodium and potassium phthalimide, T., 2362.

Hanak, A., estimation of sugar by titration with alkali of the cuprous oxide precipitated from Fehling's solution, A., ii, 166. Hance, F. E. See Louis Monroe Dennis.

Handorf, Heinrich, extraction of small quantities of liquids by the Soxhlet apparatus, A., ii, 496.

detection of the veronal group; diagnosis of veronal intoxication, A ..

ii, 884.

Handovsky, Hans, sensitiveness of cells to poison as a function of their colloidchemical conditions, A., i, 697.

Hanke, Milton Th., and Karl K. Koessler, proteinogenous amines. XII. The production of histamine and other iminazoles from histidine by the action of micro-organisms, A., i, 406. proteinogenous amines. XIII. The

electronic interpretation of certain biochemical phenomena, A., i, 408.

proteinogenous amines. XIV. microchemical colorimetric method for estimating tyrosine, tyramine, and other phenols, A., ii, 322.

proteinogenous amines. XV. A quantitative method for the separation and estimation of phenols including phenol, o-, m-, and p-cresols, and p-hydroxyphenylacetic, p-hydroxyphenylpropionic and p-hydroxyphenyl-lactic acids, tyrosine, and tyramine, A., ii, 322.

Hann, Raymond M. See Edgar Theodore Wherry.

Hanner, A. See Balthasar Pfvl.

Hanselmayer, Franz. See Alois Zinke. Hansgirg, Fritz, perylene, A., i, 245.

Hanson, A. W., method for the estimation of procaine [novocaine], A., ii, 405.

Hantge, Ernst. See Kurt Arndt.

Hantzsch, Arthur [Rudolf], the alleged hexavalency of carbon in carbonium and dyestuff salts, A., i, 24. the constitution of carbonium salts,

A., i, 24, 820.

the coloured alkali salts of triphenylmethane, and triphenylmethyl as an amphoteric ion, A., i, 25.

the so-called halochromism of triphenylmethane derivatives, A., i,

the co-ordination number of carbon,

A., i, 26.

halochromism and "solvatochromism" of distyryl ketone and simpler ketones and of their ketonic chlorides, A., i, 556.

Hantzsch, Arthur, Walther[with Meyer], supposed cases of isomerism in the isatin series, A., i, 1177.

Hanzawa, Toratoro. See Francis E. Rice.

Hara, H. See Frederick G. Keyes.

Haramaki, Katsumi, the relative activities of the secretins of the digestive tract, A., i, 698.

Hardegg, R. See K. Hugo Bauer. Harden, Arthur, and Francis Robert Henley, the function of phosphates in the oxidation of dextrose by hydrogen peroxide, A., i, 433.

Harden, Arthur. See also Arthur Wil-

liam Bacot.

Harding, T. Swann, the preparation of lævulose, A., i, 919. use of invertase for sucrose estimation,

A., ii, 167*.*

estimation of the activity of invertase, A., ii, 800.

Hardy, Paul, the relation between Vitali's reaction and the constitution of the alkaloids which give it, A., i, 948. the Vitali reaction for cocaine, A., ii,

the volatilisation and hydrolysis of atropine in toxicology, A., ii, 796.

Harger, Rolla N., the oxidation of quinol in the presence of aliphatic amines, A., i, 539.

Hári, Paul, a red colouring matter produced by the action of p-dimethylaminobenzaldehyde on normal urine, A., i, 88.

Harington, Charles Robert. See Jonathan Meakins.

Harker, George, the temperature of the vapour arising from boiling saline solutions, A., ii, 26.

Harkins, William Draper, the separation of chlorine into isotopes, A., ii,

the stability of atom nuclei, the separation of isotopes, and the whole

number rule, A., ii, 702. Harkins, William Draper, and Dwight T. Ewing, high pressure due to adsorption, and the density and volume relations of charcoal, A., ii, 123.

high pressure due to adsorption, A., ii, 197.

Harkins, William Draper, and Anson Hayes, separation of the element chlorine into isotopes (isotopic elements); the heavy fraction from the diffusion, A., ii, 140.

Harkins, William Draper, and S. L. Madorsky, a graphical study of the stability relations of atom nuclei, A.,

ii, 490.

Harkins, William Draper, and Lathrop E. Roberts, orientation of molecules in surfaces. VII. Vaporisation in steps as related to surface formation, A., ii, 422.

Harkins, William Draper. See also Robert S. Mullikan.

Harle, H., viscosities of the hydrogen haloids, A., ii, 140.

Harned, Herbert S., activity coefficients and colligative properties of electrolytes, A., ii, 255.

Harned, Herbert S., and Robert Pfanstiel, velocity of hydrolysis of ethyl acetate, A., ii, 832.

Harned, Herbert S., and Harry Seltz, ion activities in homogeneous catalysis: formation of p-chloroacetanilide from N-chloroacetanilide, A., ii, 631.

Harries, Carl Dietrich, preparation of fatty acids, aldehydes, and ketones from mineral and tar oils, A., i, 514.

Harries, Carl Dietrich, and Fritz Evers, estimation of the molecular magnitude of caoutchouc by chemical methods, A., i, 357.

Harries, Carl Dietrich, and W. Nagel, aleuritic acid, A., i, 522.

Harris, D. T., active hyperæmia, A., i,

Harris, Hinton John. See Frederick Daniel Chattaway.

Harris, John Edmund Guy, and (Sir) William Jackson Pope, isoquinoline and the isoquinoline-reds, T., 1029. Harris, M. See Samuel Palkin.

Harrison, C. W., distillation method for the estimation of santalol in santal oil, A., ii, 400.

Harrison, Douglas Creese. See Samuel Smiles.

Harrison, D. N. See Thomas Ralph Merton.

Harrison, Edward Frank, memorial to, T., 2894, 2917.

Harrison, George R., absorption of light by sodium and potassium vapours, A., ii, 679.

Harrison, William, electrical theory of

adsorption, A., ii, 198. Harrisson, J. W. E., the U.S.P. test for acetone in alcohol, A., ii, 667. Hart, Harry B. See J. Newton Pearce.

Hart, Merrill C., and Arthur D. Hirschfelder, some derivatives of saligenin, A., i, 38.

Hart, Merrill C., and Wilbur B. Payne, toxicity of neoarsphenamine [neosalvarsan], A., i, 704.

Harter, L. L., and J. L. Weimer,

pectinase produced by different species of Rhizopus, A., i, 507.

Hartley, Harold Brewer, A. O. Ponder, Edmund John Bowen, and Thomas Ralph Merton, attempt to separate the isotopes of chlorine, A., ii, 280.

Hartley, Harold Brewer. See also Cyril Norman Hinshelwood.

Hartman, H. See P. E. Verkade. Hartmann, Hellmuth. See Otto Ruff.

Hartmann, M., and M. Seiberth, dialkylamides of nicotinic acid, A., i, 679.

Hartung, Ernst Johannes, the action of light on silver bromide, T., 682. observations on the construction and use of the Steele-Grant microbalance, A., ii, 495.

Harvey, E. Newton, bioluminescence. XIV. The specificity of luciferin and luciferase, A., i, 299.

See Josef König. Hasenbäumer, J. See Josef Kön Hasenjäger, H. See Karl Fries.

Hasenöhrl, Rudolf, and Julius Zellner, the chemistry of the higher fungi. XV. Chemical relations between the higher fungiand their substrate. II., A., i, 904. Hashimoto, Tokudji. See Takaoki

Sasaki.

Hassé, H.R. See (Sir) J.B. Henderson. Hassel, Odd. See Heinrich Goldschmidt. Hasselblatt, Meinhard, the influence of pressure on spontaneous crystallisation, **A.,** ii, 35.

crystallisation velocity under high pressure, A., ii, 35.

the fusion diagram of Cd(NO₂), 4H₂O + $Ca(NO_3)_2$, $4H_2O$ at pressures of 1 to 3000 kilo./cm.2, A., ii, 61.

Hastings, A. Baird, lactic acid in the

blood of dogs in exercise, A., i, 81. Hastings, A. Baird, and Donald D. van Slyke, determination of the three dissociation constants of citric acid, A., i, 985.

Hastings, A. Baird. See also Joshua Harold Austin, and Glenn E. Cullen. Hatcher, Robert A. See Soma Weiss.

Hattori, Kenzo, colloidal structure of red blood corpuscles and hæmolysis. III. Ultramicroscopic investigation of lipoids, A., i, 192.

Hauenstein, J., blood and metabolism studies with radium emanations, A.,

i, 80.

Haughton, John L., and G. Winifred Ford, systems in which metals crystallise, A., ii, 825.

Rhizostoma cuvieri, A., i, 1210. Haurowitz,

Hauser, Ernst. See Hermann Staudinger.

Haushalter, J. See M. Bonnet.

Hawkins, James Alexander, the influence of solvents on the velocity of formation of quaternary ammonium salts. T., 1170.

Haworth, Robert Downs, and Arthur Lapworth, the direct acetalisation of

aldehydes, T., 76.

Haworth, Walter Norman, and (Miss) Grace Cumming Leitch, the constitution of the disaccharides. VI. The biose of amygdalin, T., 1921.

Hayami, Ryonosuke, equilibrium in the system copper sulphate, ammonium sulphate, potassium sulphate, and water at 25.0°, A., ii, 748.

Hayashi, Toworu. See Seizaburo Okada. Hayduck, F., and A. Haehn, zymase formation in yeast. I., A., i, 611.

Hayes, Anson. See William Draper Harkins.

Haynes, Dorothy. See Marjory Harriotte Carré.

Haywood, Percy Charles, the reactivity of alkyl iodides with sodium benzyloxide and the effect of temperature on such reactions, T., 1904.

Hazen, William, estimation of small amounts of potassium by the Lindo-Gladding method, A., ii, 658.

Hazelton, Edith Olive. See Ethel Atkinson.

Headden, William P., a tantalate and columbite from South Dakota, A., ii,

Daniel J., and Healy, Perry E. Karraker, the Clark hydrogen-electrode vessel and soil measurements, A., ii, 519.

Heap, Joseph Greenwood, William Jacob Jones, and John Bamber Speakman, the preparation of pyridine and of certain of its homologues in a state of purity, A., i, 171. **Hebler**, F. See Heinrich Bechhold.

Heck, Adolf. See G. Meyer.

Hedelius, Arvid. See Hans von Euler. Hedestrand, Gunnar, the viscosity of amphoteric electrolytes in solution, A., ii, 821.

Hedin, Sven Gustav, the proteolytic enzymes in albuminous urines, A., i, 609.

the proteolytic enzymes of the kidneys, A., i, 1212.

Hedvall, J. Arvid, examination by the X-ray spectrum of metallic oxides which are stable at red heat (prepared by different methods and having different properties, A., ii,

the colour of ferric oxide, A., ii, 381. Hedvall, J. Arvid, and Gunnar Booberg, the action of molten alkali chlorides

on copper oxide, A., ii, 68. Hedvall, J. Arvid, and J. Heuberger, transference of the acid radicle in the solid phase. I. Carbonates of the alkaline earths and magnesium, A., ii, 766.

Heene, Richard. See Otto Dimroth. Heerdt, Walter. See Hugo Weil. Heidelberger, Michael, preparation of

crystalline oxyhæmoglobin, A., i, 962. Heidelberger, Michael, and Walter Abraham Jacobs, syntheses in the cinchona series. IX. Certain quinicine and benzoylcinchona salts, **crystalline** ethyldihydrocupreine (optochin) base, and other de-

rivatives, A., i, 673. syntheses in the cinchona series. Dihydrocinchonicinol and the dihydroquinicinols, A., i, 673.

Heidelberger, Michael. See also Walter Abraham Jacobs.

Heidrich, Dorothea. See Heinrich Biltz. Heiduschka, Alfred, and E. Komm, keratin, I., A., i, 967.

Heiduschka, Alfred, and P. Roser, the composition of beechnut oil (Oleum fagi sylvaticæ), A., i, 945.

Heike, W., new detectors of high frequency vibrations, A., ii, 19.

simple methods for the determination of melting points and critical temperatures; the melting point of arsenic A., ii, 25.

the solidification diagram of the zinearsenic alloys, A., ii, 60.

Heil, Rudolf. See Fritz Mayer.

Heilbron, Isidor Morris. See Edward Charles Cyril Baly, and Johannes Sybrandt Buck.

Heilner, G. See Carl Mannich.

Heimann, Heinrich. See Erwin Ott. Hein, Franz, organo-chromium com-pounds. II. Abnormal salt formation of chromium pentaphenyl hydroxide; chromium tetraphenyl salts (elimination of a phenyl group), A., i. 76.

organo-chromium compounds. Chromium triphenyl hydroxide and

its salts, A., i, 77.

Heinrich, Fr. See Alexander Gutbier. Heinze, Fritz. See Otto Dimroth.

Heinzelmann, Alfred, rapid estimation

of mercury in ores, A., ii, 162. Helbronner, André, and W. Rudolfs, the attack of minerals by bacteria; oxidation of blende, A., i, 706.

Helferich, Burckhardt, emulsin, A., i, 390.

Helferich, Burckhardt, and Max Gehrke, γ-hydroxyaldehydes. IV. γ-hydroxyaldehydes with tertiary hydroxyl, A., i, 9.

Helferich, Burckhardt, and Theodor Malkomes, synthesis and properties of a δ-hydroxyaldehyde, A., i, 431.

Helferich, Burckhardt, and Johann Adolf Speidel, α -hydroxy-lactones, A., i, 6.

Helferich, Burckhardt, and Rudolf Weidenhagen, synthesis of substances resembling disaccharides from monohydroxyaldehydes, A., i, 1115.

Heller, Gustav, 3.hydroxy-2-phenylindazole, A., i, 1066.

Heller, Gustav, [with Walter Benade and Otto Hochmuth], new isomerism in the isatin series. V., A., i, 1058.

Heller, Gustav, and Walter Benade, the nature of isatoids, A., i, 582.

Heller, Gustav, and Werner Boessneck, isatogens, A., i, 369.

Heller, Gustav, Hilde Lauth, and Arnold Buchwaldt, reactivity of the nitrobenzaldehydes, A., i, 348.

cinnamoylformic acids, A., i, 1024. Heller, Gustav, and Paul Lindner, tetranitroanthrachrysone, A., i, 1040. Heller, Hans, a modified reaction of tin,

A., i**i, 4**58.

Heller, Ludwig, the quantitative action of some factors in the clotting of blood, A., i, 291.

Helmholtz, K. See Willy Marckwald. Helmick, Homer H., estimation of thorium in monazite sand by an emanation method, A., if, 164.

Helwert, Fritz. See Hartwig Franzen. Helwig, Herbert. See Kurt Lindner.

Hembd, K. See G. Bode.

Hemingway, A. J. See David Avery. Hemmelmayr, Franz, the dicarboxylic acid which is formed by heating 1:5dihydroxynaphthalene with potassium hydrogen carbonate under pressure, A., i, 836.

Hemmelmayr, Franz. See also Robert

Kremann.

Hemsalech, Gustave Adolphe, and (Comte) Arnaud de Gramont, occurrence of spark lines (enhanced lines) in the I. Lead and tin, A., ii, 176.

the occurrence of spark lines (enhanced lines) in the arc. II. Magnesium, zinc, and cadmium, A., ii, 410.

Hemsalech, Gustave Adolphe. See also

(Comte) Arnaud de Gramont.

Henderson, George Gerald, John Mc-Gregor Robertson, and David Christie Brown, the oxidation of sabinene with chromyl chloride, T., 2717.

Henderson, G. H., a-particles as deto-

nators, A., ii, 606.

Henderson, James Alexander Russell. See Thomas Callan.

Henderson, (Sir) J. B., and H. R. Hassé, thermodynamical theory of explosions. I and II., A., ii, 207.

Henderson, LawrenceJoseph. See

Edward F. Adolph.

Henderson, Thomas, and Alexander Killen Macbeth, the labile nature of the halogen atom in organic com-I. Titanium reductions of pounds. substituted nitroparaffins, T., 892.

Henderson, William E. See Merle L.

Dundon.

Henderson, Yandell. See Howard W. Haggard.

Henglein, Friedrich August, molecular volumes, physical properties, and molecular models of the halogens, A., ii, 44.

a vapour pressure formula with a general integration constant, A., ii,

118.

regularities in the molecular volumes of inorganic compounds, A., ii, 260.

the thermal decomposition of chlorine, A., ii, 823.

Henglein, Friedrich August, G. von Rosenberg, and A. Muchlinski, vapour pressure of solid chlorine and bromine, A., ii, 760.

Henglein, Friedrich August. See also H. von Wartenberg.
Hengstenberg, O. See Karl Borne-

mann.

Henke, C. O., and Oliver W. Brown, catalytic preparation of azobenzene and aniline, A., i, 586, 1196.

Henke, C. O. See also Oliver Brown.

Henkel, Gerhard. See Friedrich Meyer. Henley, Francis Robert. See Arthur Harden.

Henley, R. R., estimation of globulins in blood-serum, A., ii, 671.

Henning, B. H., the lipoids of the blood in tuberculosis, A., i, 963.

Henning, Fritz, numerical values of the

gas constants, A., ii, 191.

Henri, Victor, absorption spectrum of benzene vapour and the fundamental magnitudes of the benzene molecule, A., ii, 331.

the absorption and fluorescence spectra of benzene, A., ii, 679.

Henri, Victor, and Pierre Steiner, absorption of ultra-violet rays by naphthalene, A., i, 928.
Henrich, Ferdinand [August Karl],

calcium uranium autunites, A., ii, 516.

valency theories of organic chemistry, A., ii, 704.

Henrich, Ferdinand [with G. Hiller], a new mineral which contains the rare earths as its main component, A., ii,

Henrich, Ferdinand [with G. Prell], the examination of naturally occurring gases. II. and III., A., ii, 858. Henriques, Valdemar, and Rich. Ege,

the dextrose concentration in the arterial blood and in the venous blood from the muscles, A.,

Henriques de Souza. See Souza.

Henry, D. C., kinetic theory of adsorption, A., ii, 740. Henry, P. See H. Weiss.

Henry, Thomas Anderson, and Thomas Marvel Sharp, mercury compounds of hydroxybenzaldehydes, T., 1055.

Henstock, Herbert, the solubility of phenanthrene in various organic

solvents, T., 2124.

Hepburn, Joseph Samuel, the enzymes of the abdominal adipose tissue of the common turkey, Meleagris gallipavo, A., i, 196.

Hepburn, Joseph Samuel, and E. Q. St. John, sugar content of the hen's egg,

A., i, 294.

Hepner, B. B. See Israel Lifschitz. Hepworth, Harry, some recent applications of magnesium in synthetic organic chemistry, A., i, 118. Herberts, K. See K. Hugo Bauer.

Herbst, Heinrich, influence of watercontent on the adsorption-capacity of an active charcoal, A., ii, 30.

Hérissey, Henri, biochemical synthesis of a-methyl-d-mannoside, A., i,

estimation of salicylic acid in bloodserum and other fluids of the body, A., ii, 880.

Hérissey, Henri, and P. Delauney, presence in several indigenous orchids of glucosides yielding coumarin on hydrolysis, A., i, 210.

Hermann, Paul, derivatives of dulcin, A., i, 1151.

Hermanns, Leo, the nature of Ehrlich's diazo-reaction. III., A., i, 1091.

Hermans, P. See Jacob Böeseken.

Herold, Julius. See Wilhelm Steinkopf. Herrera, A. L., diffusion in porous vessels, A., ii, 427.

Herrick, Margaret C. See C. J. Gamble.

Herrmann, E. See Jean Piccard. Herrmann, Erika. See Robert Schwarz.

Herrmann, K., Dolezalek's theory of solutions, A., ii, 552.

Herrmann, Marianne.See HansFischer.

Herrmann, Walter. See William Küster. **Hertz**, Gustav, excitation and ionisation potentials of neon and argon, A., ii,

Herxheimer, Herbert, effect of primary sodium phosphate on body power, A., i, 970.

Herz, Walter [Georg], the properties of organic liquids, A., ii, 23.

atomic and molecular volumes at the absolute zero. II., A., ii, 29.

relationship of the internal friction of organic liquids to other properties, A., ii, 30.

refraction of light at corresponding temperatures, A., ii, 97.

coefficient of expansion of molten salts,

A., ii, 116. the density of casium at the absolute

zero, A., ii, 289. validity of the laws of the internal friction of liquids, A., ii, 352.

relationships between molecular refraction and other properties, A., ii, 409.

entropy of the elements and the periodic system, A., ii, 548. fused salts, A., ii, 739.

the heat of evaporation, A., ii, 818. corresponding states, A., ii, 821.

Herz, Walter, and Paul Schuftan, physico-chemical investigation of tetrahydronaphthalene \mathbf{and} decahydronaphthalene, A., i, 647.

Herz, Walter. See also Richard Lorenz. Herzberg, Kurt, detection of traces of lactose in urine by formation of formaldehyde, A., ii, 167.

Herzfeld, Eugen. See Emil Baur. Herzfeld, Karl F., width of the absorption bands of the rare earths, A., ii, 6.

theory of catalysis in homogeneous gas reactions, A., ii, 136.

application of statistics to chemical equilibria, A., ii, 269.

Herzig, Josef, the action of diazomethane on the ureides and uric acid, A., i, 373.

Herzig, Josef, and Hans Lieb, deaminoproteins, A., i, 386.

Herzig, Paul, methods for the estimation of the alkaloids, A., ii, 538.

Herzog, Johannes, the estimation of albumose-silver, A., ii, 798.

Herzog, Walter, and J. Kreidl, relation between ability to form resins and chemical constitution. III. A new method for producing synthetic resins, A., i, 1168.

a supposed method for the quantitative separation of "saccharin" from p-sulphaminobenzoic acid, A., ii, 237.

Herzog, Walter. See also Paul Friedländer.

Heslinga, J., oxidation of manganese to permanganate in alkaline solution, A., ii, 589.

colorimetric estimation of manganese in steels, alloys, and ores, A., ii, 660.

Hess, E. See Alfred Benrath.

Hess, Kurt, cellulose. V. A new degradation of cellulose; conversion of cellulose into a biose anhydride, A., i, 12.

chemistry of the manufacture of artificial silk, A., i, 922.

Hess, Kurt, and Wilhelm Corleis, 1-a-N - methylpiperidylethan - 1 - one, A., i<u>, 1</u>70.

Hess, Kurt, and Ernst Messmer [with (Frl.) E. Jagla], cellulose. VII. Cellulose copper compounds, A., i,

Hess, Kurt, and Ottmar Wahl, scopoline. VI. The constitutions of scopolamine and scopoline; the Hofmann degradation of scopoline, A., i, 854.

Hess, Kurt, and Wilhelm Weltzien, triphenylethinylcarbinol and analogues, A., i, 35.

Hess, Kurt, and Walter Wittelsbach, cellulose. VI. De-polymerisation of ethyl-cellulose, A., i, 116.

Hess, W. R., the function of the vitamins in the chemistry of the cell, A., i, 399, 788.

Hesse, Erich, [pllysiological] effect of cyanamide, A., i, 1093.
Hessler, John C., the preparation of phenylacetylene, A., i, 442.

Hetényi, Géza. See Stefan Rusznyák.

Hetterschij, C. W. G. See J. Hudig. Heubach, F. See Paul Jacobsen. Heuberger, J. See J. Arvid Hedvall.

Heubner, Wolfgang, and Robert Meyer-Bisch, the free and esterified sulphuric acid in normal and in pathological body-fluids, A., i, 291.

Heuser, Emil, pentosans, A., i, 921. Heuser, Emil [with Maria Braden, and E. Kürschner], pentosans, A., i, 113.

Heuser, Emil, and H. Casseus, estimation of the cellulose content of wood and other raw materials by the action of chlorine and carbon tetrachloride, A., ii, 664.

Heuser, Emil, and Wilhelm Ruppel, methyl ethers of xylan, A., i, 810.

Heuser, Emil, and Sigurd Samuelsen, oxidation of lignin and lignosulphonic methyl ethers, A., i. 812.

Heuser, Emil, R. Schmitt, and L. Gunkel, methylation of lignin, A., i,

Emil, and Fritz Stöckigt, Heuser. oxycellulose, A., i, 719.

Hevesy, Georg von, an attempt to influence the rate of radioactive disintegration by use of penetrating radiation, A., ii, 608.

loosening of crystal lattices, A., ii,

Hevesy, Georg von. See also Johannes Nicolaus Brönsted.

Hewis, H. W. See Edmund Brydges Rudhall Prideaux.

Hewitt, James Arthur, and David Henriques de Souza, the metabolism of carbohydrates. II. On the possible occurrence of stereochemical changes in equilibrated solutions of reducing sugars introduced into the circulation, A., i, 395.

Hewitt, James Arthur, and Dorothy Beatty Steabben, fermentation *i*-inositol, A., i, 406.

Hewitt, James Arthur. See also John William Pickering.

Heyde, H. C. van der, estimation of small quantities of atropine in bloodserum, A., ii, 669.

Heyl, Frederick W., the phytosterols of

ragweed pollen, A., i, 1224. Heyl, Frederick W., and Frank E, Greer, sodium hyposulphite, A., ii, 288. Heymann, Paul, influence of minute concentrations of acid and alkali on the blood-vessels and other smooth muscle, A., i, 791.

Heyrovsky, Jaroslav, the constitution of aluminates, A., ii, 771.

electrolysis with drops of mercury as

the electrode, A., ii, 816. Hibbert, Eva. See Edmund Knecht.

Hickman, Kenneth Claude Devereux, and Reginald Patrick Linstead, a modified methyl-orange indicator, T., 2502.

Hickox, Edgar Herbert Cuthbert. See William Davies.

Hicks, John F. G., reactions in fused salt media. I. Basic lead chromates, A., ii, 147.

Hicks, John F. G., and Wallace A. Craig, reactions in fused salt media. II. Šolvolysis, A., ii, 622.

Hicks, William Mitchinson, spectrum lines of neutral helium, A., ii, 675.

Hieulle, A. See Robert Fosse.

Higginbotham (Miss) Lucy, and Arthur Lapworth, the formation of substituted succinic acids from esters of aB-unsaturated acids, T., 49.

Higginbotham (Miss) Lucy, and Arthur Lapworth [with Charles Simpson], formation of γ-alkylidene derivatives from ethylidenemalonic ester, T., 2823.

Hijikata, Yoshizumi, the cleavage products of the crystalline lens, A., i,

do the amino-acids occur in cow's milk ? A., i, 494.

influence of putrefaction products on cellular metabolism. II. The influence of phenylacetic and phenylpropionic acids on the distribution of nitrogen in the urine, A, i, 495.

Hilcken, Valentin. See Otto Dimroth. Hild, Wilhelm, rapid method for the estimation of chromium in nickelchromium steel, A., i, 660.

Hildebrand, Joel H., and Clarence A. Jenks, solubility. VII. Solubility relations of rhombic sulphur, A., ii,

Hildebrand, Joel H. See also Edna R. Bishop.

Hilditch, Thomas Percy. See Edward Frankland Armstrong.

Hill, A. Elizabeth, and A. K. Balls, a sulphonated naphthylarsinic acid, A., i, 1080.

Hill, Arthur E., the system silver per-

chlorate-water-benzene, A., ii, 555.

Hill, Arthur E., and Thomas M.

Smith, hydrated oxalic acid as an oxidimetric standard, A., ii, 388.

Hill, Arthur Joseph, and Erwin B. Kelsey, thiocyanates and thiocarbimides. XV. The nature of the intramolecular rearrangement of thiocarbimidoacetanilides, A., i, 1141.

Hill, Arthur Joseph. See also Treat Baldwin Johnson.

Hill, Archibald Vivian, the combinations of hæmoglobin with oxygen and carbon monoxide, and the effects of acid and carbon dioxide, A., i, 193.

the interactions of oxygen, acid, and carbon dioxide in blood, A., i, 696.

Hill, Archibald Vivian. See also Joseph Barcroft, and W. E. L. Brown. Hill, Elsie, and W. R. Bloor, fat ex-

cretion, A., i, 968.

Hill, Henry Rowland. See Frederick

Daniel Chattaway.

Hiller, Alma, and Donald D. van Slyke, protein precipitants, A., i, 1074.

Hiller, Alma. See also Donald D. van Slyke.

See Ferdinand Henrich. Hiller, G.

Hilliger, E. See Karl von Auwers. Hilton, O. See E. V. Lynn.

Himstedt, F., and Irma Wertheimer, influence of pressure on the refractive index of some organic liquids, A., ii,

Hinard, Gustav, and Robert Fillon, the chemical composition of starfish, A.,

Hinchy, Victor M. See Thomas Dillon. Hines, Paul R. See William Lloyd Evans.

Hinkel, Leonard Eric, and William Dudley Williams, action of the chlorides of phosphorus on chlorodimethyldihydroresorcinol, T., 2498.

Hinshelwood, Cyril Norman, Edmund John Bowen, velocity of chemical change in solid substances, A., ii, 628.

Hinshelwood, Norman, and CyrilHarold Hartley, probability of spontaneous crystallisation of supercooled liquids, A., ii, 200.

Hinshelwood, Cyril Norman, Harold Hartley, and B. Topley, influence of temperature on two alternative modes of decomposition of formic acid, A., ii,

Hinshelwood, Cyril Norman. See also Harold Calvert Tingey.

Hintikka, S. V., sulphite liquor lactone,

A., i, 347. Hirabayashi, N. See Leonor Michaelis. Hirose, Mitsuic. See Tokutaro Sakao. Hirose, W. See Georg Joachimoglu.

Hirsch, Julius, the oxidative degradation of dextrose in the animal body, A., i, 87.

carboligase. V. The binding of carbon to carbon biosynthetically in the

aliphatic series, A., i, 973.

Hirsch, Julius. See also Carl Neuberg. Hirsch, Max, detection of traces of osmium by means of potassium thiocyanate A., ii, 459.

Hirsch, Paul, physico-chemical studies on biological reactions. I., A., i, 785.

Hirsch, Paul, and Rudolf Kunze, physico-chemical studies on biological reac-tions. II. Spectro-chemical investigations on amino-acids and polypeptides, A., i, 781.

Hirschfelder, Arthur D. See Merrill C. Hart.

Hirschko, K. See F. Halla.

Hirsch-Pogany, Margit, is the heat-coagulation of protein a hydrolysis? A., i, 596.

Hirst, C. T., and Joseph E. Greaves, factors influencing the estimation of sulphates in soil, A., ii, 521.

Hirst, Edmund Langley, and Alexander Killen Macbeth, the labile nature of the halogen atom in organic compounds. II. Action of hydrazine on nitrogen-halogen compounds and on bromomalonic esters, T., 904.

the labile nature of the halogen atom in organic compounds. action of hydrazine on the halogen derivatives of some esters and substituted cyclohexanes, T., 2169.

Hirst, Edmund Langley. See also Ian Armstrong Black, Albert Carruthers, and James Colquhoun Irvine.

Hitchcock, David I., the colloidal behaviour of edestin, A., i, 693.

the combination of gelatin with hydrochloric acid, A., i, 882.

the colloidal behaviour of serum globulin, A., i, 1074.

Hitchcock, David I. See also John Maurice Nelson.

Hixon, Ralph M., the effect of the re-action of a nutritive solution on germination and the first stages of plant growth, A., i, 1221.

complex ion formation in hydrochloric acid, A., ii, 815.

Hjalmar, Elis, Röntgen spectra, A., ii,

Hladký, Jan, the use of Hanus's method for the determination of the iodine figure of mineral oils, A., ii, 722.

Hochmuth, Otto. See Gustav Heller. James H. See TheodoreHodges, William Richards.

Höhn, Fritz. See Ignaz Bloch.

Hoel, A. B. See Arthur Wesley Browne. Hölzl, Franz. See Robert Müller.

Hönig, Reinhold. See Robert Müller.

Hönigsberger, F. See Paul Jacobsen.

Hönigschmid, Otto and Lothar Birckenbach, revision of the atomic weight of glucinum; analysis of glucinum chloride, A., ii, 214.

revision of the atomic weight of boron; analysis of boron trichloride, A., ii,

641.

Hoenlinger, H. See M. Richter-Quittner. Höppler, E. F., quantitative analysis by measurement of the degree of supersaturation, A., ii, 863.

Hoffert, W. H., estimation of phenol in mixtures of tar acids, A., ii, 878.

Hoffman, Alfred, the action of hydrogen phosphide on formaldehyde, A., i, 8.

Hoffman, Walter Fred, and Ross Aiken Gortner, sulphur in proteins. I. The effect of acid hydrolysis on cystine, A., i, 429.

Hoffman, Walter Fred. See also Ross Aiken Gortner.

Hoffmann, Alex. See Géza Zemplén.

Hoffmann, Fritz, the oxygen-absorption and concentration of pyrogallol solutions used in gas analysis, A., ii, 582.

Hoffmann, G., experimental decision of the question of the radioactivity of all elements. II., A., ii, 184.

Hoffmann-La Roche & Co., F., preparation of 3:7-dimethyl-1-allylxanthine, A., i, 585.

preparation of allylarsinic acid, A., i, 818, 926.

preparation of isopropylallylbarbituric acid, A., i, 872.

Hofmann, Josef. See Hans Lecher.

Hofmann, Karl Andreas, the oxygenhydrogen catalysis by the platinum metals and the contact potentials in presence of aqueous electrolytes, A., ii, 276.

mode of action of platinum in oxygenhydrogen catalysis and the application of titanium sulphuric acid for the control of the course of the

change, A., ii, 490.

Hofmann, Karl Andreas, and Erich

Will, formation of acetylene and ammonia during incomplete combus-

tion, A., i, 1107.

Hogness, Thorfin R., surface tensions and densities of liquid mercury, cadmium, zinc, lead, tin, and bismuth, A., ii, 29.

Hoher, E. See J. V. Dubsky. Hohl, Heinz. See Robert Kremann. Hohorst, Georg. See Wilhelm Biltz. Holborn, Ludwig, and J. Otto, the isotherms of nitrogen, oxygen, and helium, A., ii, 737.

Holde, David, determination of the

iodine value of aliphatic and aromatic

unsaturated compounds, A., ii, 665.

Holde, David, [with P. Werner, Ida Tacke, and C. Wilke], the iodine values of aliphatic and aromatic unsaturated compounds, A., ii, 723. Holde, David, and K. Schmidt, bras-

sidic anhydride, and anhydridisation by means of carbonyl chloride, A., i, 982.

Holde, David, and Ida Tacke, the electrical conductivity of anhydrides of the higher fatty acids, A., ii, 109.

Holde, David, P. Werner, Ida Tacke, and C. Wilke, determination of the iodine value of aliphatic and aromatic unsaturated compounds, A., ii, 533.

Holde, David, and C. Wilke, erucic acid and its anhydride. I., II., and III., A., i, 317, 519, 713.

Holden, Edward F., ceruleofibrite, a new mineral, A., ii, 516.

constitution of thaumasite, A., ii, 860. Frederik, mono-Holleman, Arnold

chlorotrinitrobenzenes, A., i, 997. See Alexander Hollenberg, M. S. Thomas Cameron.

Hollins, Cecil, the mechanism of the Fischer indole synthesis, A., i, 863.

Holluta, Josef, mechanism of the re-duction of permanganate and its physico-chemical basis. I. Reaction between [potassium] permanganate and formic acid in slightly acid

solution, A., ii, 448. mechanism of the reduction of permanganate and its physico-chemical foundation. III. Reaction between manganate and formic acid, A., ii,

mechanism of the reduction of permanganate and its physico-chemical IV. Reduction of permanbasis. ganate by formate in alkaline

solutions, A., ii, 771.

Holluta, Josef, and Nikolaus Weiser, mechanism of the reduction of permanganate and its physico-chemical basis. II. Reaction of permanganate and formic acid in neutral solution, A., ii, 628.

Holm, Kurt. See A. Bornstein.

Holmberg, Bror, stereochemical studies. VI. Stereoisomeric trithiocarbodilactic acids, A., i, 1113.

Holmes, Edward O., jun., photochemical activity of the triphenylmethanesulphonic acids, A., ii, 465.

Holmes, Edward O., jun., and Walter A. Patrick, action of ultra-violet light on gels, A., ii, 338.

Holmes, Harry N., and Don H. Cameron, cellulose nitrate as an emulsifying agent, A., ii, 268.

chromatic emulsions, A., ii, 269.

Holmsen, J. See S. Schmidt-Nielsen. Holmyard, Eric John, Arabic chemistry, A., ii, 636.

Holt, Harold S. See James Bryant Conant.

Holtsmark, J., the characteristic Röntgen radiation from carbon and boron, A., ii, 543.

Holtz, Friedrich, Pregl's microanalysis, A, ii, 521.

Holwerda, B. I., influence of lactic acid on lactic acid fermentation, A., i, 611.

Holzer, Paul, and Heinz Mehner, estimation of bilirubin in blood, A., ii, 799.

Homolka, B., croconic acid and leuconic acid, A., i, 630.

Hompe, Louise. See H. S. Forbes.

Honda, Kôtarô. the constitutional diagram of the iron-carbon system based on recent investigations, A.,

Bohr's model of the hydrogen molecules and their magnetic suscepti-

bility, A., ii, 838. Honold, Ernst. See Emil Fromm. Hooft, M. See W. D. Treadwell.

Hooker, Marian O. See Martin Henry Fischer.

Hoop, L. de, new observations on the constitution of the carbohydrates, A., i, 434.

Hoover, Ora L. See William Lloyd

Hope, Edward, ethyl a-cyano-β-methylglutaconate and its methyl homologues, T., 2216.

Hope, Edward, and George Clifford Riley, chlorination of benzoyl chloride. I., T., 2510.

ide. I., T., 2510.

Hope, Edward, and Wilfrid Sheldon, the addition of hydrogen cyanide to derivatives of glutaconic acid. I. The addition of hydrogen cyanide to ethyl a-cyano-\(\beta\)-methylglutaconate and its homologues, T., 2223.

Hopkins, B. Smith. and F. H. Driggs,

rare earths. III. Atomic weight of

lanthanum, A., ii, 770.

Hopkins, B. Smith. See a
Kiess, and L. F. Yntema. See also C. C.

Hopkins, Frederick Gowland. See E. J. Morgan.

Hopper, F. L. See Paul W. Merrill.

Hopper, Isaac Vance. See Forsyth James Wilson.

Horiuchi, Riki, formation of triphenylpararosaniline hydrochloride diphenylamine and chloralammonia, A., i, 1067.

Horlacher, E. See Paul Karrer.

Horn, Trude. See Heinrich Schroeder. Horn, William John, pyrimidines. XCI. Alkylation of 2-thiolpyrimidines, A., i, 374.

Hornemann, Curt, the action of pilocarpine on the glycogen content of

organs, A., i, 296.

Horrisberger, Walter. See Leon Asher. Horrmann, Paul, and Friedrich Bischof, picrotoxin. XII. Picrotin ketone, $C_{14}H_{16}O_3$, A., i, 161.

Horst, (Mlle) H. van der. See Jean Timmermans.

Horton, Frank, and Ann Catherine Davies, spectroscopic investigation of the ionisation of argon by electron collisions, A., ii, 811.

Hostetter, J. Clyde. See John R. Cain. Houdremont, E. See Theodor Dieck-

Hougen, Haakon. See Heinrich Goldschmidt.

Houghton, J. E. See W. A. Bloedorn. Houstoun, Robert Alexander, the quantum mechanism in the atom, A., ii, 633.

Howard, C. P. See Robert B. Gibson. Howard, H. A. See P. J. Cammidge. Howard, J. W., the enzyme hydrolysis of benzyl succinate, A., i, 960.

Howard & Sons, Ltd., John William Blagden, and Maximilian Nierenstein, preparation of amino-derivatives of hydrogenated cinchona alkaloids and their derivatives, A., i, 853.

Howe, Paul E., an effect of the ingestion of colostrum on the composition of the blood of new-born calves, A., i,

relation between age and the concentrations of protein fractions in the blood of the calf and cow, A., i,

the estimation of proteins in blood—a micro-method, A., ii, 171.

the use of sodium sulphate as the globulin precipitant in the estimation of proteins in blood, A., ii,

the differential precipitation of the proteins of colostrum and a method for the estimation of the proteins in colostrum, A., ii, 670.

Howell, Owen Rhys. See Alexander Findlay.

Howes, Horace L., the spectra structure of the luminescence excited by the hydrogen flame, A., ii, 335.

Howes, Horace L. See also Edward L. Nichols.

Hoyt, Lester F., and H. V. Pemberton, estimation of glycerol in the presence of sugars, A., ii, 321.

Hristie, P. See W. D. Treadwell. Hubbard, Roger S., estimation of B-hydroxybutyric acid; estimation of acetone substances in the urine; estimation of acetone substances in the blood, A., ii, 234.

Hubbard, Roger S., and Samuel T. Nicholson, jun., acetonuria of diabetes,

A., i, 969.

Hubbard, Roger S., and Floyd R. Wright, blood acetone substances after the injection of small amounts of adrenaline chloride, A., i, 288.

acetonuria produced by diets containing large amounts of fat, A., i, 496. Hubbuch, W. See A. Koenig.

Huber, J., estimation of manganese as

sulphate, A., ii, 398.

Huber, J. See also Alexander Gutbier. Huber, Karl Jakob, the excretion by the gastric mucous membrane and the salivary glands of alkaloids administered subcutaneously, A., i, 1214.

Huber, L. See Paul Jacobsen.

Hubert, P. See Paul Ruggli. Huchet, P. See P. Brodin.

Huebner, Julius, and F. Kaye, effect of water and certain organic salts on celluloses, A., i, 435.

Huebner, Julius, and J. N. Sinha, action of iodine on celluloses, silk, and wool,

A., i, 434.

Hübscher, Julius, the graphical representation of the composition of chemical compounds, A., ii, 156.

Hudig, J., and C. W. G. Hetterschij, Comber's reaction for acidity of soils, A., i, 1104.

Hudson, Donald Pryce. See Edward Charles Cyril Baly.

Hückel, E., scattering of Röntgen rays by anisotropic liquids, A., ii, 14.

Hückel, Walter, the meaning of the atomic constants of heat of combustion and molecular refraction, A., ii, 195. heats of combustion and energy of

dissociation, A., ii, 818. Hückel, Walter. See also Adolf Windaus. Hültenes. K. See Karl von Auwers.

Huerre, R., the rôle played by the various elements of the wood of Juniperus oxycedrus in the formation of oil of cade, A., i, 505.

Hüttig, Gustav F., valency. XVI. The compounds ammonia of calcium

haloids, A., ii, 849.

Hüttig, Gustav F., and Bruno Kurre, the hydrates of tungsten trioxide,

A., ii, 773.

Hüttig, Gustav F., and Edith von Schroeder, the hydrates of uranium tetroxide and uranium trioxide, A., ii, 510.

Hüttig, Gustav F. See also Wilhelm Biltz.

Hugel, G. See Martin Battegay.

Huggins, Maurice L., conjugation and the structure of benzene, A., i,

the structure of benzene, A., i, 997.

atomic structure, A., ii, 632.

atomic radii. I., A., ii, 634.

the crystal structure of quartz, A., ii, 641.

the crystal structures of aragonite (CaCO₃) and related minerals, A., ii,

the crystal structures of marcasite (FeS2), arsenopyrite (FeAsS), and loellingite (FeAs2), A., ii, 651.

electronic structures of crystals, A., ii, 744.

electronic structures of atoms, A., ii, 838.

Hughes, A. Ll., characteristic X-rays from boron and carbon, A., ii, 184.

Hughes, Edward J. See Frank X. Moerk.

Hughes, W., a possible reconciliation of the atomic models of Bohr and of Lewis and Langmuir, A., ii, 632.

Hughes, William Earl, electro-deposition of lead from Mathers's perchlorate I. Structure of the deposit, A., ii, 446.

Hulbert, E. O., the broadening of the Balmer lines of hydrogen with pressure, A., ii, 801.

Hulett, George Augustus. See Guy B. Taylor.

Hull, Albert W., X-ray crystal analysis of metals, A., ii, 624.

Hull, Albert W., and Wheeler P. Davey, graphical determination of hexagonal and tetragonal crystal structures from X-ray data, A., ii, 624.

Hulot, Pierre, metallurgy of tellurium by the wet way, A., ii, 142.
Hulthén, Erik, and Ernst Bengtsson,

the band spectra of cadmium, A., ii,

Hulton, Henry Francis Everard. See Julian Levett Baker.

Hunt, Seth Bliss, preparation of ketones from secondary alcohols, A., i, 810.

Hunter, George, estimation of carnosine in muscle extract, A., ii, 328, 885. Knoop's test for histidine, A., ii, 885.

Hupper, M. See E. M. Black. Hurd, Charles D. See Lauder William

Jones. Hurst, Eric. See John Read.

Hussey, Robert E. See Brainerd Mears.

Husson, A. See Gustave Vavon.

Hutton, Robert. See John Arnold Cranston.

I.

Iatrides, D. See Ernst Winterstein. Ide, Toshio, the tryptophan content of important foodstuffs, A., i, 414.

Ikeda, Kikunae, and Shintaro Kodama, manufacture of chloro-acids, A., i, 219.

Imbert, Georges. See British Dyestuffs Corporation, Ltd.

Imker, Albert. See Rudolf Schenck. Ingersoll, Harry R. See Leon A.

Congdon.

Ingold, Christopher Kelk, the structure of the benzene nucleus. I. Intranuclear tautomerism, T., 1133.

the structure of the benzene nucleus. II. Synthetic formation of the bridged modification of the nucleus, T., 1143.

the form of the vapour pressure curve at high temperature. I. The curve

for lead, T., 2419.

the conditions underlying the formation of unsaturated and cyclic compounds from halogenated open-chain V. Products derived derivatives. from α-halogenated β-methylglutaric acids, T., 2676.

Ingold, Christopher Kelk, and Lewis Charles Nickolls, experiments on the synthesis of the polyacetic acids of methane. VII. iso-Butylene-αγγ'methane. VII. iso-Butylene-αγγ'-tricarboxylic acid and methanetetra-

acetic acid, T., 1638.

Ingold, Christopher Kelk, and Edward Arthur Perren, experiments on the synthesis of the polyacetic acids of methane. VI. Methanetriacetic acid and its unstable esters, T., 1414.

Ingold, ChristopherKelk,EdwardArthur Perren, and Joselyn Field Thorpe, ring-chain tautomerism. III. The occurrence of tautomerism of the three-carbon (glutaconic) type between a homocyclic compound and its nusaturated open-chain isomeride, T., 1765.

Ingold, Christopher Kelk, and Henry Alfred Piggott, the mobility of symmetrical triad systems. I. The conditions relating to systems ter-minated by phenyl groups, T., 2381. the additive formation of four-mem-

bered rings. I. The synthesis and division of derivatives from 1:3dimethindiazidine, T., 2793.

Ingold, Christopher Kelk, Shinichi Sato, and Jocelyn Field Thorpe, the influence of substituents on the formation and stability of heterocyclic compounds. I. Hydantoins, T., 1177.

Ingold, Christopher Kelk, and (Miss) Edith Hilda Usherwood, the specific heats of gases with special reference

to hydregen, T., 2286

Ingold, Christopher Kelk, and Daniel Wilson, the reversibility of the reaction between nitrogen, carbon, and sodium carbonate, T., 2278.

Ingold, Christopher Kelk. See also Juan Pedige Charles Chandrasena, and

Ernest Harold Farmer.

Inichov, G. S., the chemical action of rennin, A., i, 960.

Inoue, Harushige, electrolytic reduction of some carboxylic acids, A., i, 36. Ionescu, Al., chemistry of diabetic

glycosuria, A., i, 198. barium chloride poisoning, A., i, 199.

the defecation of blood for the estimation of carbamide, A., ii, 596.

Ionescu, Al., and C. Pop, new method for the detection of bile pigments, A., ii, 671.

Ionescu, Al. See also Stefan Minovici. Iredale, Thomas, the rôle of protective colloids in catalysis. II., T., 1536.

Irion, Clarence E. See Gerald L. Wendt. Irvine, James Colquhoun, and John Campbell Earl, mutarotation and pseudo-mutarotation of glucosamine and its derivatives, T., 2370.

salicylidene derivatives of d-glucos-

amine, T., 2376.

Irvine, James Colquhoun, and Edmund Langley Hirst, 2:3:6-trimethyl glucose, T., 1213.

the constitution of polysaccharides.
V. The yield of glucose from cotton

cellulose, T., 1585.
Irvine, James Colquhoun, and Jocelyn Patterson, the constitution of acetone derivatives of glucose and fructose, T., 2146.

1:3:4:6-tetramethyl fructose, T., 2696. Irvine, James Colquhoun, (Miss) Ettie Stewart Steele, and (Miss) Mary Isobel Shannon, the constitution of polysaccharides. IV. Inulin, T., 1060.

Irwin, Marian, sensory stimulation by alcohols and chlorohydrins, A., i, 899.

Isaac, Salo, and Erich Adler, the steric transformation of the hexoses through the agency of organs and cells (the so-called stereokinases), A., i, 297.

Isaacs, M. L., colorimetric estimation of hydrogen peroxide, A., ii, 715.

colorimetric estimation of blood chlorides, A., ii, 716.

Isgarischev, N., and Sophie Berkmann, overvoltage on electrodes and its connexion with the hydration of ions, A., ii, 253.

influence of colloids on overvoltage, A., ii, 254.

Ishida, Yoshitoyo. See Yasuhiko Asa-

Ishihara, F., tetrodon poison and some of its chemical characteristics, A., i, 85.

Ishino, Matakichi, evidence of the existence of isotopes of chlorine, A., ii, 760.

Islip, Harold Thomas. See Oswald Digby Roberts.

Itagaki, Takeyoshi. See Yoshiharu Murayama.

Ivanitzkaja, Agness. See Nikolai Schilov.

Ivers, Otto. See Karl Freudenberg.

Iversen, Poul. See Johannes Bock. Ives, Herbert E., proposed standard

method of colorimetry, A., ii, 221.

Iwamoto, Yoshitora, properties and composition of tohaku oil, A., i, 98.

Iwanov, Nicolaus N., the change undergone by nitrogenous substances in the final phases of yeast autolysis, A., i, 202.

the influence of fermentation products on the decomposition of proteins in yeast, A., i, 202.

protein decomposition in yeast during fermentation, A., i, 202.

Iyer, K. R. Krishna. See Kishori Lal Moudgill.

Izaguirre, Ramon de, surface tension of aqueous solutions of night-blue, A., ii, 262.

Izaguirre, Ramon de. See also Wolfgang Ostwald.

J.

Jablczyński, K., and F. J. Wiśniewski, equilibrium law of electrolytes, A., ii, 190. Jackman, Douglas Norman, and (Miss) Agnes Browne, the 25°-isotherms of the systems magnesium nitrate-sodium nitrate-water and magnesium sulphate-magnesium nitrate-water, T., 694.

Jackman, Douglas Norman. See also William Edward Garner.

Jackson, D. H. See Francis P. Venable.
Jackson, Henry, jun., and Walter W.
Palmer, a modification of Folin's colorimetric method for the estimation of uric acid, A., ii, 328.

the estimation of uric acid, A., ii, 795.

Jackson, J. W. See Alexander O.

Gettler.

Jackson, L. C., dielectric constants of some esters at low temperatures, A., ii, 252.

Jackson, Richard Fay, and Clara G. Silsbee, solubility of dextrose in water, A., i, 986.

Jackson, S. D. See William Ridgely Orndorff.

Jacobs, Walter Abraham, and Michael

Heidelberger, aromatic arsenic compounds. IX. Diazoamino-compounds of p-aminophenylarsinic acid
and its derivatives, A., i, 73.

aromatic arsenic compounds. X. Azodyes derived from p-aminophenylarsinic acid, A., i, 74.

syntheses in the cinchona series. VII. 5:8-Diaminodihydroquinine and 5:8-diamino-6-methoxyquinoline and their conversion into the corresponding aminohydroxy- and dihydroxy-

bases, A., i, 671.
syntheses in the cinchona series. VIII.
The hydrogenation of dihydrocinchonine, cinchonine, and dihydroquinine, A., i, 672.

Jacobs, Walter Abraham. See also Michael Heidelberger.

Jacobsen, Helene. See Karl von Auwers. Jacobsen, Paul, summary of results on the isomeric changes of hydrazo-compounds, and considerations relating to the possibilities of their explanation, A., i, 596.

Jacobsen, Paul, [with David Runciman Boyd, M. Freund, H. L. Fulda, F. Heubach, F. Hönigsberger, L. Huber, M. Jaenicke, H. Jost, G. Lockemann, A. Loeb, J. Pelzer, St. Pinkus, W. Sachs, P. Schmidt, H. Tigges, and K. Zaar], the isomeric changes of hydrazocompounds, A., i, 589.

Jacobsohn, Isadore M. See Morris S. Kharasch.

Jacobson, J., catalytic action of benzyl alcohol, A., i, 652.

Jacoby, Martin, artificial zymogens. II., A., i, 480.

formaldehyde as an intermediate step between the real assimilation and the formation of carbohydrate in the plant. II., A., i, 502.

Jacoby, Martin, and Käte Frankenthal, the importance of the amino-acids of hæmoglobin for the cultivation of the

influenza bacilli, A., i, 302.

Jacoby, Martin, and Tomihide Shimizu, artificial zymogens. III., A., i, 481.

artificial zymogens. IV. Inactivation and reactivation of takadiastase, A., i, 481.

adsorption of ferments and zymogens. I. and II., A., i, 481.

Jacquot, Raymond. See René Wurmser. Jadin, F., and A. Astruc, relation between manganese content and proportion of ash in young and old leaves, A., i, 1098.

Jaeck, Wolfgang. See Franz Fichter. Jaeger, Frans Maurits, crystallography of derivatives of benzophenone, A., i, 353.

Jaeger, Frans Maurits, and G. Berger, the action of ultra-violet light on aqueous solutions of some organic acids and their salts, A., i, 316.

Jaeger, Frans Maurits, and H. C. Germs, binary systems of the sulphates, chromates, molybdates, and tungstates of lead, A., ii, 65.

Jäger, Gustar, theory of Brownian movement, A., ii, 30.

Jaeger, Paul. See Wilhelm Steinkopf. Jaeger, Siegfried. See Richard Anschütz.

Jäggi, A. See Hans Rupe.

Jänecke, Ernst, Le Chatelier's "new" geometrical representation, A., ii, 427. Jaenicke, M. See Paul Jacobsen.

Jaffeux, (Mme) Pierre. See Marcel Delépine.

Jagla, (Frl.) E. See Kurt Hess. Jahn, R. See Amé Pictet.

Jaitschnikov, Iv. S., hydrolysis of glycylglycine by hydrochloric acid, A., i, 1124.

identification of alanine by crystallochemical analysis, A., ii, 884.

Jakob, W. F., researches on the photochemically sensitive compounds of molybdic and formic acids, A., i, 712.

Jakubowicz, Heinrich, the influence of temperature and constitution on the decomposition velocity of substituted malonic acid, A., ii, 361.

Jakubowicz, Heinrich. See also August L. Bernoulli.

Jaloustre, Léon. See Laborde and Pierre Lemay.

James, Charles. See Paul H. M.-P. Brinton, and H. C. Fogg.

James, R. W. See William Lawrence Bragg.

Jameson, Henry Lyster, Jack Cecil Drummond, and Katharine Hope Coward, synthesis of vitamin-A by a marine diatom (Nitzschia closterium, W. Sm.) growing in pure culture, A., i, 1099.

Jamieson, George Samuel. See Walter

F. Baughman.

See K. Becker. Jancke, Willi.

Jander, Gerhart, chemical analysis with membrane filters. III. Their applica-

tion to volumetric analysis, A., ii, 457.

Jander, Gerhart, and Erwin Wendehorst, the quantitative estimation and separation of aluminium, A., ii, 529. Jander, W. See Gustav Tammann

Jandraschitsch, Franz. See Mona Adolf. Janet, (Mile) Marthe Paul, the estimation of urea in urine by the hypobromite method with complete yield,

A., ii, 794.

Janet, (Mlle) Marthe Paul. See also
W. Mestrezat.

Jansch, H., I. Estimation of methyl alcohol in remains for forensic purposes. II. Occurrence of methyl alcohol in the human body, A., ii, 232.

Jánský, V. See Julius Stoklasa. Marie. See NikolaiJantschak, Schilov.

Jarisch, Adolf, influence of temperature on hypotonic hæmolysis, A., i, 394. soap and serum, A., i, 1087.

Jassoy, HSee Adolf Sieglitz.

Jeffery, F. H., electrolysis of aqueous solutions of alkali nitrites with a lead anode, and an electrometric determination of the constitution of the complex ion formed, A., ii, 611.

Jellinek, Karl, and Alois Diethelm, generator gas equilibrium at high

pressures, A., ii, 833.

Jellinek, Karl, and H. Ens, some new volumetric methods (estimation of sulphate, lead, acids, and ammonia), A., ii, 864.

Jellinek, Paul. See Sigmund Fränkel. Jemma Giuseppe, indican reactions for the detection of urine in stains, A., ii, 460.

Jenge. Wilhelm, the chemical and electrical behaviour of some series of alloys, A., ii. 64.

Jenkins, William Job. See James William McBain.

Jenks, Clarence A. See Joel H. Hildebrand.

Jennings, J. M. See T. H. Rogers. Jenny, Ernst. See Franz Fichter.

Jensen, H. See Adolf Windaus. Jeppsson, Carl Alex. See Erik Matteo Prochet Widmark.

Jess, A., the content of the proteins of the lens in histidine, arginine, and

lysine, A., i, 1199.

Jirsa, Franz, the effect of telluric acid on the potential of a silver anode, A., ii, 418.

Jirsa, Franz, and Ot. Buryanek, the anode oxidation of gold. I. Anode oxidation of gold in sulphuric acid, A., ii, 713.

Joachimoglu, Georg, the action of some derivatives of chloroform with special reference to Traube's theory of the action of narcotics of the aliphatic series, A., i, 199.

comparative experiments on the antiseptic action of some chloro-derivatives of methane, ethane, and ethylene, A., i, 304.

the action of sublimate, phenol, and quinine on yeast, A., i, 903.

the elective action of tellurium salts on bacteria of the colon-typhoid group, A., i, 1095.

a lecture experiment for demonstrating the dependence of the antiseptic action of mercury compounds on the degree of ionisation, A., ii, 211.

the degree of ionisation, A., ii, 211.

Joachimoglu, Georg, and W. Hirose, pharmacology of selenium and tellurium. III. The action of their acids on the organs of the circulation, A., i, 396.

pharmacology of selenium and tellurium. II. Action of their acids on diphtheria bacilli, A., i, 406.

Job, André, and Henri Guinot, preparation of dimethyl- and diphenylarsinecarboxylic acids, A., i, 75.

Job, André, and René Reich, attempt at a systematic extension of the preparation of organometallic compounds; application to ferrous ethyl iodide, A., i, 645.

Job, Paul, electrometric study of the hydrolysis of some complex cobaltammines under the action of barium hydroxide. A. ii. 301.

hydroxide, A., ii, 301. the hydrolysis of the roseocobaltic salts, A., ii, 382.

Jodlbauer, Alb., and F. Haffner, the relation between fluorescent substances which act in the dark and their photodynamic activity on cells A i 94

dynamic activity on cells, A., i, 94.

Joëi, Ernst, viscometric and stalagmometric measurements of urine, A.,
i, 198.

Joffe, Jacob S. See Jacob Goodale Lipman, and Selman A. Waksman.

Johannessen, A., qualitative and quantitative demonstration of blood in urine, A., ii, 724.

Johannsen, Adolf. See Fritz Paneth. Johannsen, Otto. See Alois Zinke.

Johansson, Hjalmar, and Sidney M. Hagman, β-halogen-substituted fatty acids and β-lactones, A., i, 425.

John, Carl. See Johannes Gadamer.

Johns, Carl Oscar, Lewis H. Chernoff, and Arno Viehover, saponin from Agave lechuguilla, Torrey, A., i, 797.

Johns, Carl Oscar, and Charles E. F. Gersdoff, the proteins of the seed of the tomato, Solanum esculentum, A., i, 800.

Johns, Carl Oscar. See also David Breese Jones.

Johnson, Harlan W., relation of hydrogen-ion concentration in soils to their "lime requirement," A., i, 708.

Johnson, John R., and Roger Adams, 4-carboxy-2-phenylquinoline-6-arsinic acid, A., i, 187.

Johnson, Treat Baldwin, and Lawrence W. Bass, the spontaneous decomposition of imino-ethers, A., i, 736.

Johnson, Treat Baldwin, and Oskar Baudisch, pyrimidines. XCII. New methods of identifying the pyrimidine, thymine, A., ii, 328.

Johnson, Treat Baldwin, Arthur Joseph Hill, and Francis H. Case, the action of diazomethane on uracil, A., i, 471.

Johnson, Treat Baldwin. See also
Oskar Baudisch, and George W.
Pucher.

Johnston, R. A. A., and H. V. Ellsworth, the Annaheim meteorite, A., ii, 306.

Jolibois, Pierre, and Robert Bossuet, relationships between the different oxides of uranium, A., ii, 301.

precipitation from uranyl nitrate by means of sodium hydroxide; radioactivity of the precipitate, A., ii, 575.

Joly, John, haloes and earth-history; a new radioactive element, A., ii, 651.

Jonas, K. G., natural and artificial humic acids, A., i, 326.

Jones, A. J., the arsenic content of some of the marine alge. A., i. 905.

of the marine alge, A., i, 905.

Jones, David Breese, A. J. Finks, and
Charles E. F. Gersdorff, proteins of the
adsuki bean, Phasrolus angularis, A.,
i, 504.

nes, David Breese, Charles E. F. Gersdorff, Carl Oscar Johns, and A. J. Finks, proteins of the lima bean, Phaseolus lunatus, A., i, 1101.

Jones, David Breese, and Carl Oscar Johns, estimation of the monoaminoacids in the hydrolytic cleavage pro-

ducts of lactalbumin, A., i, 182.

Jones, David Breese, and Henry C.

Waterman, the digestibility of proteins in vitro. III. The chemical nature of the nutritional deficiencies of arachin, A., i, 893.

Jones, De Witt O., and Henry R. Lee, electrometric titration of azo-dyestuffs, A., ii, 239.

Jones, De Witt O. See also Henry R. Lee.

Jones, Edward William Taylor, obituary

notice of, T., 746.

Jones, G. W., and W. L. Parker, formation of nitrogen oxides in the slow combustion and explosion methods

in gas analysis, A., ii, 223.

Jones, G. W. See also Vernon C. Allison.

Jones, J. S., and J. C. Reeder, the use of silica crucibles for the estimation of potassium in soils, A., ii, 85.

Jones, Lauder William, and Charles D. Hurd, rearrangements of some new hydroxamic acids related to heterocyclic acids and to diphenyl- and triphenyl-acetic acids, A., i, 248.

Jones, Lauder William, and Alfred W. Scott, new hydroxamic acids derived from cyclopropanecarboxylic acid, isobutyric acid, and dibenzylacetic acid; a comparative study of the Beckmann rearrangement of their derivatives, A., i, 453.

Jones, Lauder William. See also Walter H. Beisler.

Jones, Martha R., calcium content of blood plasma and corpuscles in the

new-born, A., i, 80.

Jones, P. F. See Ellwood B. Spear.

Jones, S. Bayne. See A. J. Schaffer. Jones, Walter, the thermostable active agent of pig's pancreas, A., i, 479.

Jones, William Jacob, and John Bamber Speakman, some physical properties of aqueous solutions of certain pyridine bases, A., i, 171.

Jones, William Jacob. See also Joseph Greenwood Heap.

Jonesco, Stan, transformation, by oxidation, of the chromogens of some

plants into a red pigment, A., i, 97. formation of anthocyanin in the flowers of Cobæa scandens at the expense of pre-existing glucosides, A., i, 97.

Jonesco, Stan, the distribution of anthocyanidins in the coloured organs of plants, A., i, 797.

the transformation of a chromogen of yellow flowers of Medicago falcata under the action of an oxydase, A., i, 1224.

Jong, Anne Willem Karel de, the action of light on the cinnamic acids and the constitution of the truxillic acids, A., i, 339.

biscoumaric acids, A., i, 1049.

Jong, Anne Willem Karel de, and A. Reclaire, estimation of the so-called total geraniol content of citronella oil, A., ii, 790.

Jong, H. G. de. See Hugo Rudolph Kruyt.

Jonsson, Erik, alkali silver thiosulphates and their ability to unite with ammonia, A., ii, 57.

Joos, G. See Chr. Füchtbauer.

Joret, Georges, volumetric estimation of copper by means of sodium nitroprusside, A., ii, 872.

Jorpes, Erik. See Einar Hammarsten. Joseph, Alfred Francis, and Bernard Wyndham Whitfeild, Sudan essential oils, A., i, 754.

Joseph, Alfred Francis. See also (Miss) Ida L. Millican.

Josephson, K. See Hans von Euler.

Jost, H. See Paul Jacobsen. Joussen, Jacob. See Hans Meerwein.

Joyner, Reginald Arthur, the viscosity of cellulose in cuprammonium hydroxide solution. I. The determination of the viscosity, T., 1511.

the viscosity of cellulose. II. The lowering of the viscosity of cellulose by various reagents, T., 2395.

Jülicher, W. See Karl von Auwers.

Jüptner, Hanns von, processes in gas generators and blast furnaces, A., ii,

Jürgens, J. See Johan Pieter Wibaut. Juge-Boirard, G. See Georges Chaudron. Jumelle, Henri, barbassu nuts, A., i, 207.

sakoa oil from Madagascar, A., i, 210.

Jung, A., the influence of hydrogen-ion concentration on the solubility of uric acid, A., i, 1070.

Jung, A., and H. Müller, the biological difference of stereoisomerides, A., i,

Jung, J., estimation and distribution of chlorine in plants, A., i, 1098.

Jung, R. See Fritz Mayer. Jungkunz, R. See J. Pritzker.

Jurist, Alfred E. See Ben H. Nicolet.

Justin-Mueller, Ed., comparative action of heat on cellulose, hydrocellulose, and oxycellulose and the characterisation of hydrocellulose by dry heat, A., i, 11.

orcinol reaction of furfuraldehyde, A.,

ii, 95.

hydrotimetric precision and aqueous preparation of the standard soap solution, A., ii, 658.

K.

Kaan, Maria. See Hans Fischer.Kabeshima, I., toxin of the fish, Plotosus anguillaris, A., i, 608.

Käding, Kurt, comparative estimations of acetone in urine, A., ii, 793.

Kaehrn, Hans. See Hermann Leuchs.
Käsz, Artur. See Sigmund Fränkel.
Kaffer, H. See Walther Dilthey.

Kahho, Hugo, the effect of neutral salts on the heat coagulation of plant protoplasm, A., i, 94.

action of neutral salts on plant plasma. II. and IV., A., i, 205, 308.

the toxic action of heavy-metal salts on plant plasma. III., A., i, 311.

Kahlenberg, Louis, some new colour reactions of cholesterol, A., ii, 591.

Kahn, H. M. See James Bryant Conant.
Kahn, Max, and Joseph Barsky, acute yellow atrophy of the liver, A., i, 969.

Kai, Sotaro, estimation of trypsin; a modification of Gross's method, A., ii, 672.

Kailan, Anton, reactions in penetrating radium radiation and in ultra-violet radiation filtered by quartz glass. II. The hydrogen peroxide equilibrium set up in radium radiation, A., ii, 106.

the chemical action of penetrating radium rays. XIII. The velocity of formation and equilibrium of hydrogen peroxide, A., ii, 466.

the chemical action of penetrating radium rays. XIV. The action on oxalic acid, potassium tetroxalate, and potassium chlorate, A., ii, 543. the influencing of the catalysis of

the influencing of the catalysis of hydrogen peroxide with platinum by Röntgen rays, A., ii, 756.

by Röntgen rays, A., ii, 756.

Kailan, Anton, and Emanuel Franz
Neumann, formation and hydrolysis
of lactones. II., A., ii, 433.

Kaiser, O. See Alphonse Gams. Kaiser, Wilhelm. See Julius von Braun.

Kaiser, Withelm. See Julius von Braun. Kaisha, Sonkyô Kabushiki. See Yoshitarô Suzuki. Kakiuchi, Samuro, physico-chemical properties of phospholipin. I. Precipitation of lecithin hydrosol by electrolytes, A., i, 711.

Kalb, Ludwig. See Richard Willstätter. Kalle & Co., preparation of triazoles of the aromatic series (ψ-azimides), Λ., i. 61.

preparation of a-chloronaphthalene derivatives, A., i, 819.

preparation of naphthasultonesulphonyl chlorides, A., i, 819.

preparation of 1-arylamino-4-hydroxy-naphthalenes, A., i, 823.

preparation of a derivative of 2-amino-5-hydroxynaphthalene-7-sulphonic

acid, A., i, 824.
preparation of diaminodinaphthyland dinaphthacarbazole-sulphonic

acids, A., i, 867. **Kallmann**, *Hartmut*, theory of strong electrolytes, A., ii, 125.

carbon monoxide-oxygen cell with glass as electrolyte, A., ii, 467.

Kamm, Oliver, and Roger Adams, γ -dibutylaminopropyl p-aminobenzoate, A., i, 828.

Kamm, Oliver, and Walter H. Newcomb, γγ'-dihalogenodipropyl ethers, A., i, 105.

Kamm, Oliver, and E. H. Volwiler, γ-diallylaminopropyl p-aminobenzoate, A., i, 654.

Kamm, Oliver, and John H. Waldo, ββ'-dichlorodiethyl ether; the oxygen analogue of mustard gas, A., i, 105.

Kanai, T. See Yoshitane Mori.

Kanitz, Aristides, the significance of the second dissociation constant of uric acid in the equilibrium of monourate solutions, A., i, 277.

Kannappel, Ernst. See Wilhelm Strecker.

Kanô, Naotsuna, preservation of starch solution, A., i, 230.

applications of amalgams in volumetric analyses. IV. The uses of cadmium amalgam, A., ii, 529.

amaigam, A., ii, 529. conductometric titration of hydrofluosilicic acid, A., ii, 719.

use of amalgains in volumetric analysis. VI. Electrometric titration of iron, molybdenum, uranium, vanadium, and titanium, A., ii, 721.

Kapfhammer, Joseph, the formation of mercapturic acid during the ingestion of a protein minimum, A., i, 293.

Karamessinis, S. See Paul Friedländer. Karczag, László, oxidation catalysis. I. and II., A., ii, 42, 137. Karczag, László, the importance of

sequence in biology, A., i, 302.

Karczag, László, and K. Hajós, the importance of sequence in biology. II., A., i, 302.

Karlsson, Karl Gustav, the maximum stability of esters of carboxylic acids, A., ii, 40.

Karlsson, Signe. See Hans von Euler. Karraker, Perry E. See Daniel J. Healy.

Karrer, Enoch, rhythmic deposition of precipitated vapours, A., ii, 496.

Karrer, Paul, polysaccharides. XII. Glycogen, A., i, 11. hydroxycarbonyl compounds; 2:4:6:2'-

tetrahydroxybenzophenone, A., i,

alkali-cellulose and the structure of cellulose, A., i, 231.

a new degradation of cellulose; conversion of cellulose into a biose anhydride, A., i, 231.

preparation of amino-alcohols, A., i, 991.

Karrer, Paul [with W. Fioroni],

polysaccharides. XVI., A., i, 1119. Karrer, Paul, and Elisabeth Bürklin, polysaccharides. XIV. The amyloses, A., i, 435.

Karrer, Paul, M. Gisler, E. Horlacher, F. Lochner, W. Mäder, and H. Thomann, proteinogenous amino-alcohols and cholines. II., A., i, 813. amino-

Karrer, Paul, Ch. Gränacher, and A. Schlosser, alkylation of anhydrides of amino-acids, A., i, 235.

Karrer, Paul, and E. Horlacher, the of proteinogenous decomposition cholines into alcohols of the cinnamyl alcohol type, A.. i, 825.

Karrer, Paul, C. Nägeli, and Alexander P. Smirnov, glucosides. X. The action of dl-acetobromoglucose on the silver salt of dl-mandelic acid, A., i, 253.

Karrer, Paul, and J. Peyer, methylated saccharic acid and methylated mucic

acid, A., i, 809.

Karrer, Paul, and J. O. Rosenberg, sublimation experiments with carbohydrates, A., i, 812.

Karrer, Paul, and Harry R. Salomon, crystalline synthetic tannins. I., A., i, 266.

Karrer, Alexander Paul, and Smirnov, the constitution and configuration of the anhydro-sugars, A., i, 228.

of diamylose and of the anhydropolysaccharides. sugar (cellosan) of cellulose, A., i, 435.

Karrer, Paul, Max Staub, and A. Wälti, polysaccharides. XIII. Inulin and the alkali hydroxide compounds of the anhydro-sugars, A., i, 229. Karssen, A. See J. M. Bijvoet.

Karsten, Alfred. See Rudolf Ehrenberg. See John Joseph Karvé, D. D. Sudborough.

Karwat. See Bernhard Neumann. Kashima, Kozo. See Shigeru Komatsu. Katinszky, Hans von. See Hermann

Leuchs. Katsch, Gerhardt, and Géza Német, alkapton chromogen, A., i, 198.

Kattwinkel, R., the melting point of normal ammonium sulphate, A., ii, 445.

Katz, Sidney H., and J. J. Bloomfield, tests of an iodine pentoxide indicator for carbon monoxide, A., ii, 585.

Kauffmann, Hugo, constitution carbonium dyes; halochromism, A., i, 820.

nature of the ionogen linking, A., ii, 366.

Kaufmann, Adolf, synthesis of quinic acid, A., i, 464.

Kaufmann, H. P., the exchange of halogen in unsaturated, aliphatic halogenated hydrocarbons. I., A., i, 213.

bactericidal action of pyromucic acid, A., i, 304.

keto-enolic tautomerism, A., i, 985. Kaufmann, H. P., and M. Friedebach, a variety of wax from pine needles and certain abietic esters, A., i, 740.

Kaufmann, H. P, and W. Kaufmann [with H. Götting], substituted salicylic acids. I., A., i, 252.

Kaufmann, H. P., and M. Schneider, condensations of acetylene. I. Elucidation of the constitution of cuprene, <u>A.,</u>i, 245.

Kaufmann, H. P., and H. Zobel, isomeric sulphonimides of naphthoic acid, a contribution to the theory of dulcegenic groups, A., i, 744.

Kaufmann, H. P. See also Ludwig Knorr.

Kaufmann, W. See H. P. Kaufmann. Kautsky, Hans, and H. Zocher, the relationship between chemi- and photoluminescence in unsaturated silicon

compounds, A., ii, 464.

Kay, Herbert Davenport, and Henry
Stanley Raper, mode of oxidation of
fatty acids with branched chains. II. The fate in the body of hydratropic, tropic, atrolactic, and atropic acids together with phenylacetaldehyde, A., i, 1093.

Kay, L. J. See Edward de Barry Barnett.

Kaye, F. See Julius Huebner. See Emil Fromm.

Kayser, Erich. Keeler, L. M. See L. Bauman. Keeler, R. F. See A. W. Clark.

Keeton, Robert W., excretion of ammonia following experimental administration of acids via the stomach and peripheral vein, A., i, 300.

Kehrmann, Friedrich, constitution of quinonoid organic onium salts, A.,

i. 259.

theory of carbonium compounds, A., i, 331.

constitution and colour. VIII., A., ii, 333.

Kehrmann, Friedrich, and Jean Henri Dardel, sulphonium bases derived from thiodiphenylamine and analogous substances, A., i, 1063.

Kehrmann, Friedrich, Herman Decker, and Ch. Schmajewski, oxonium salts from phenol ethers and phenols. Decomposition of oxonium salts from thymol ethyl ether and from anisole by water or substances of alkaline reaction, A., i, 32.

Kehrmann, Friedrich, Herman Decker, and B. Solonina, oxonium salts from phenol ethers and phenols. I. Nitrosophenol dyes. IV., A., i, 32.

Kehrmann, Friedrich, and R. van der Laar, oxonium salts of azo-substances, A., i, 384.

Kehrmann, Friedrich, and St. Micewicz, the history of the blue oxidation product from diphenylamine, A., i, 28.

Kehrmann, Friedrich, and Gustave Roy, the blue oxidation product of diphenylamine, A., i, 467.

Kehrmann, Friedrich, Gustave Roy, and Marie Ramm, the so-called peroxidation products of leuco-triphenylmethane dves, A., i, 467.

Kehrmann, Friedrich, Maurice Sandoz, and R. Monnier, nitro-derivatives of

quinol, A., i, 33. Keil, J. See Walter König.

See Paul W. Merrill. Keith, Clyde R. Keller, Rudolf, acidity and basicity, A., ii, 131.

Kellermann, Karl. See Fritz Weigert. Kellev, George Leslie, and E. W. Evers, solid sodium hydroxide as an absorbent for carbon dioxide in steel analysis, A., ii, 160.

Kelley, George Leslie, and J. A. Wiley, estimation of chromium in ferrochromium by electrometric titration, A., ii, 164.

Kelley, George Leslie, J. A. Wiley, Raymond T. Bohn, and W. C. Wright, estimation of vanadium and chromium in ferrovanadium by electrometic titration, A., ii, 89.
Kelley, Louise. See William Ridgely

Orndorff.

Kellner, J., estimation of glycerol by the dichromate method, A., ii, 399, **723.**

Kellner, William, obituary notice of, T., 2912.

Kelly, Margaret W. See Arthur W. Thomas.

Kelsey, Erwin B. See Arthur Joseph Hill.

Kemp, Archie R. See Howard J. Lucas. Kendall, F. E. See H. H. Mitchell.

Kendall, James, application of ideal solution equations to dilute aqueous solutions, A., ii, 32.

abnormality of strong electrolytes and the ionisation theory of Ghosh, A., ii, 419.

Kendall, James, and Howard Adler, compound formation and solubility in systems of the type, formic acidmetal formate, A., i, 5.

Kendall, James, Howard Adler, and Arthur W. Davidson, prediction of solubility in polar solutions, A., ii,

compound formation and conductivity in systems of the types formic acidmetal formate and sulphuric acidmetal sulphate, A., ii, 126.

Kendall, James, and James C. Andrews. solubilities of acids in aqueous solutions of other acids, A., ii, 34.

Kendall, James, and J. J. Beaver, compound formation in phenol-cresol mixtures, A., i, 136.

Kendall, James, and Elizabeth Brakeley, compound formation and viscosity in solutions of the types acid-ester, acidketone, and acid-acid, A., ii, 126.

Kendall, James, and Francis J. Fuchs, catalytic influence of foreign oxides on the decomposition of silver oxide, mercuric oxide, and barium peroxide, A., ii, 147.

catalytic decomposition of certain oxides, A., ii, 646.

Kendall, James, and Paul M. Gross, factors affecting the stability of additive compounds in solution and their influence on ionisation equili-

bria. I., A., ii, 32.

compound formation and specific conductivity in solutions of the types, acid-ester, acid-ketone, and acidacid, A., ii, 33.

Kennaway, Ernest Laurence, and James McIntosh, the action of whole blood on acids, A., i, 788.

Kenner, James, configurations of molecules of benzenoid substances, A., i, 533.

Kenner, James. See also Harold Burton, and George Hallatt Christie.

Kenyon, Joseph, a simplified method for the resolution of methyl-n-hexylcarbinol, T., 2540.

Kerb, Johannes, and Kurt Zeckendorf, the course of alcoholic fermentation in presence of calcium carbonate, A., i, 305.

Kerb, Johannes. See also A. Bornstein.
Kereszty, Georg von, and Emil Wolf,
preparation of morphine allyl ether,
A., i, 854.

preparation of aryl sulphonic esters of halogenated aliphatic alcohols, A., i, 1131.

Kerkow, F. See Karl Fries.

Kermack, William Ogilvy, William Henry Perkin, jun., and Robert Robinson, harmine and harmaline. V1. The synthesis of N-methyltetrahydronorharmine and the constitution of harmaline and of the alkylated harmines, T., 1872.

Kermack, William Ogilvy, and Robert Robinson, an explanation of the property of induced polarity of atoms and an interpretation of the theory of partial valencies on an electronic basis, T., 427.

Kern, E. See Walter Madelung.

Kesseler, H., R. Röhm, and G. Lutz, the estimation of nitrogen in nitric esters, A., ii, 392.

Keyes, Frederick G., Joule-Thomson effect for air, A., ii, 24.

Keyes, Frederick G., Lowis J. Gillespie, and Shinroku Mitsukuri, a continuous flow calorimeter, and the determination of the heat of neutralisation of a solution of hydrochloric acid by one of sodium hydroxide; A., ii, 424.

Keyes, Frederick G., and H. Hara, pressure of oxygen in equilibrium with silver oxide, A., ii, 353.

Keyes, Harmon E. See Herman V. Tartar.

Keyssner, Ernst. See Hartwig Franzen. Kharasch, Morris S., aromatic mercuriorganic derivatives; the Hofmann rearrangement and the nature of valencies of mercury in mercuriorganic derivatives, A., i, 188.

an indirect method of preparation of organic mercuric derivatives and a method of linking carbon to carbon, A., i, 189. Kharasch, Morris S., and Isadore M. Jacobsohn, mercuri-organic derivatives; the mercurisation of aromatic amines and its relation to the theory of substitution, A., i, 189.

Kharasch, Morris S., Frederick W. M. Lommen, and Isadore M. Jacobschn,

the nitroanilines, A., i, 603.

Khouri, J., inconstancy of the precipitation of uric acid from urine in the form of cuprous urate, A., ii, 885.

Kickinger, Heinrich, decomposition of citric acid of cow's milk by some

bacteria, A., i, 1219.

Kieran, Arthur Joseph, electrical conductivity of hydrochloric acid and potassium chloride in presence of sucrose, A., ii, 812.

Kiesel, Alexander, yeast protein, A., i, 408.

the presence of ornithine in plants, A., i, 412.

the glutencasein of buckwheat, A., i, 412.

the enzymic degradation of arginine in plants. II., A., i, 413.

the action of arginase on agmatine and tetramethylenediguanidine; the

specificity of enzymes, A., i, 413. synthesis and properties of tetramethylenediguanidine, A., i, 531.

the constituents of the pollen grain of Pinus sulvestris. A., i. 799.

Pinus sylvestris, A., i, 799.

Kiesel, Alexander, and Troitzki, the distribution of urease in plants, A., i, 410.

Kiess, A. See Alexander Gutbier.

Kiess, C. C., B. Smith Hopkins, and Harry C. Kremers, wave-lengths longer than 5500 A. in the arc spectra of yttrium, lanthanum, and cerium, and the preparation of pure rare earth elements, A., ii, 244.

Kikuchi, Mitzugi, purine metabolism; fate of ingested purines, A., i, 698.

Kikuchi, Suetarô, application of amalgams in volumetric analyses. III. Estimation of iodic, bromic, and chloric acids, A., ii, 519.

effect of adsorption by stannic sulphide on the estimation of phosphates,

A., ii, 525.

use of amalgams in volumetric analysis.
V. Estimation of iron, titanum, uranium, and methylene blue, A., ii, 721.

Kiliani, Heinrich, chemistry of the sugars. II. and IV., A., i, 223, 1111.

Kiliani, Heinrich, [with Aug. Wingler], chemistry of the sugars. III., A., i, 321.

Killian, J. A., and Carl P. Sherwin, chemistry of normal and abnormal pregnancies, A., i, 489.

Kilpatrick, Mary L. See Annie Louise Macleod.

Kimura, Kenjirô. See Yûji Shibata.

Kimura, Masamichi, and Mitsuharu Fukuda, the intensities of the lines in the Balmer series of hydrogen, A., ii, 801.

influence of gases and vapours on the intensities of the lines of the secondary spectrum of hydrogen, A., ii, 801.

Kindermann, E. See Georg Schroeter. Kindler, Karl. See Paul Rabe.

King, Annie Millicent, the effect of high concentration of salt on the viscosity of a soap solution, A., i, 621.

King, Arthur S., the electric furnace spectrum of scandium, A., ii, 100. electric furnace experiments involving ionisation phenomena, A., ii, 810.

King, George.See John Addyman Gardner.

King, Harold, the isolation of muscarine, the potent principle of Amanita

muscaria, T., 1743. King, Harold, and Albert Donald Palmer, the resolution of tropic acid and the stereochemical configuration

of the cinchona alkaloids, T., 2577. King, H. H., and R. W. Wampler, adsorption and orientation of the molecules of dibasic acids and their ethereal salts in liquid-vapour interfaces, A., ii, 741.

King, Herbert Joseph Seymour. Gilbert Thomas Morgan.

King, Harold S., correlation of atomic structure and spectra, A., ii, 277.

a proposed laboratory test of the theory of relativity, A., ii, 439.

King, J. Fitch, and Walter A. Patrick, measurement of dielectric constants, A., ii, 109.

King, Jessie L., anticoagulating substances in the mucous membrane of the uterus, A., i, 701.

King, Louis V., lecture-room demoustration of atomic models, A., ii, 705.

Kinney, A. McB. See James Bryant Conant.

Kinose, Jiro. See Takaoki Sasaki. Kinugasa, Yutaka, and Hisajirô Tatsuno, detection of \$\beta\$-naphthol in foods, spices, and beverages, A., ii, 400.

Kirby, W., determination of the meltingand boiling points of anthracene, phenanthrene, and carbazole, A., i, 27.

Kirchhof, Franz, the action of concentrated sulphuric acid on natural and artificial caoutchoucs. Il., A., i, 562.

empirical and structural composition of natural and synthetic caoutchouc, A., i, 945.

Kirschbaum, George. See Julius von Braun.

Kisch, Franz, elimination of iron in urine, A., i, 898.

Kishi, Niichiro. See Heisaburô Kondô. Kiss, Julius, physical chemistry of alexin-fixation reaction, A., i, 706.

Kissling, A. See Rudolf Friedrich Weinland.

Kittredge, Esther B. See Edna R. Bishop.

Kjellin, Carl, hydroxylamine, A., ii, 640. Klänhardt, the distillation of greatly frothing liquids, A., ii, 472.

Klason, Peter, lignosulphonic acid, A., i,

the cellulose content of pine wood, A., i, 99.

constitution of pine lignin. II., A., i,

lignin as it occurs in wood, A., i, 413. Kleeman, Richard Daniel, an electrical doublet theory of the nature of the molecular forces of chemical and physical interaction, A., ii, 366.

Klein, G., anthochlor, A., i, 1099.

Klein, Paul. See Isidor Traube. Klein, W., cellulose fermentation in the paunch of the ox and its importance for metabolic experiments. A., i, 82.

Klein, W., and Maria Steuber, method for direct estimation of carbon dioxide and oxygen in the Berthelot bomb and its importance for the metabolic balance of herbivora, A., ii, 159.

Kleiner, Israel Simon. See Isaac Neuwirth.

Kleinfeller. See Otto Diels.

Kleitman, Nathaniel. See William Salant.

Klemenc, Alfons, behaviour of a nonattackable electrode in the process equilibrium leading to the $3HNO_2 \rightleftharpoons 2NO + HNO_3 + H_2O_1$, A., ii, 253.

Klemenc, Alfons, and Cornelie Bunzl, comparison of the methods for the estimation of nitric oxide, A., ii, 783.

Klemenc, Alfons, and Friedrich Pollak, decomposition of nitrous acid, A., ii,

titration of nitrous acid, and the estimation of nitrous and arsenious acids in the presence of each other, A., ii, 865.

Klement, F. See David Reichinstein. See Ernst Hermann Klement, Riesenfeld.

Klemm, L. See Wilhelm Eller.

Klemmer, Aloys, high percentage hydrogen peroxide (perhydrol) for the estimation of the total sulphur in illuminating gas, A., ii, 224.

Kleucker, Ernst, condensations of pnitrobenzyl chloride with cinnamaldehyde and furfuraldehydes, A., i,

Klimont, Isidor, co-ordination forms of glycerides. I., A., i, 517.

apparatus for hydrogenation at ordinary pressures, A., ii, 369. estimation of chlorine in organic com-

pounds, A., ii, 580.

Kling, André, and Arnold Lassieur, separation and estimation of copper, lead, antimony, and tin; analysis of white metals, A., ii, 86.

the analysis of sour milk, A., ii,

402.

rapid electro-analysis, A., ii, 587. apparatus for measuring the hydrogenion concentration of a solution, A., ii, 715.

Kling, André, Arnold Lassieur, and (Mme) Arnold Lassieur, apparatus for measuring the hydrogen-ion concentration of a solution; application to the detection of mineral acids in vinegar, A., ii, 234, 519.

Klingstedt, F. W., ultra-violet ab-

sorption spectrum of phenol in different solvents, A., ii, 332.

the ultra-violet absorption spectra of dihydric phenols, Å., ii, 680. Knaffi-Lenz, E., intestinal saccharase,

A., i, 485.

blood saccharase and the antigen properties of yeast saccharase, A., i, 694.

Knaggs, (Miss) Isabel Ellie, inorganic complex salts; crystallographic and optical study. I., T., 2069.

Knapp, Arthur W., and Raymond V.

Wadsworth, reactions between the higher fatty acids and salts of the knecht, Edmund, and Eva Hibbert, preparation of d-pimaric acid of m. p. 212°, A., i, 1020.

Knecht, Edmund, and F. P. Thompson, behaviour of oxidised cellulose, A., i,

Knesebeck, Anna Marie von dem, and Fritz Ullmann, the xanthone series, A., i, 359.

Knies, W. See Fritz Mayer.

Knipping, Paul, ionisation tension of the halogen hydrides, A., ii, 186.

Knoevenagel, Emil, keto-anils. Reduction products of keto-anils, A., i, 1060.

Knoevenagel, Emil, and Hans Bähr, ketoanils. II. Constitution of the N-alkylketoanils and transformation of aliphatic ketoanils into derivatives of quinoline, A., i, 750. Knoevenagel, Emil, and Hedwig Busch,

an alkali-soluble modification of

cellulose, A., i, 636.

Knoevenagel, Emil, and Oskar Goos, ketoanils. III. Fatty-aromatic ketoanils, A., i, 751.

Knoll & Co., preparation of neutral soluble double compounds of the alkyl xanthines and their N-acyl derivatives, A., i, 464.

Knoop, Franz, reductions and oxidations and a coupled reaction in the intermediary metabolism of the animal

body, A., i, 486. Knorr, Ludwig, and H. P. Kaufmann, equilibrium in solution of the desmotropic-isomeric diacetylsuccinic esters and its colorimetric estimation, A., i, 220.

Knoth, G. See Hermann Ost.

Knowles, H. B. See Gustav Ernst Fred Lundell.

Knudson, Arthur, and Melvin Dresbach, a chemical method of assaying the active principles of digitalis, A., ii, 882.

Knudson, Arthur. See also F. Randles.

Kobayashi, Shûmei, alligator and crocodile oils, A., i, 792.

a highly unsaturated hydrocarbon, and some higher alcohols in a commercial illipé fat, 1113.

Kobayashi, Shûmei. See also Shuichi Nakatogawa.

Koch, Erich. See Walter Gerlach.

Koch, Peter Paul, and Fritz Schrader, action of light on silver chloride, bromide, iodide, A., and 182.

Koda, Chu. See Leon Asher.

Kodama, Shintaro, preparation of phenyl-

acetaldehyde, A., i, 349. Kodama, Shintarô. See also Kikunae

Koechlin, Rudolf, minerals from Ljubija, Bosnia, A., ii, 860.

Kögl, Fritz. See Heinrich Wieland.

Köhler, Antonie. See Kurt Lindner. Köhler, Bohdan, iodometric studies. II., **A**., ii, 530.

Köhler, K. See Walter König. Köhler, Ludwig. See Kurt Brass. **Koenig,** A., and W. Hubbuch, formation of hydrogen cyanide from nitrogen and hydrocarbons in the electric arc, A., i, 642.

König, Fritz, estimation of perchlorate by Rothmund's method, A., ii, 310.

König, Josef, J. Hasenbäumer, and E. Kroger, factors in the development

of soil acidity, A., i, 510.
König, Theodor. See Ernst Weitz.
König. Walter, [with H. Zorn], the constitution of the pinacyanols, a contribution to the chemistry of the quinocyanines, A., i, 1188.
König, Walter, and J. Keil, 1:8-naphtha-

sultam-4-sulphonic acid and certain

of its derivatives, A., i, 822.
König, Walter, and K. Köhler, the mechanism of coupling reactions. 1:8-naphthasultam and its N-methyl derivative as azo-components, A., i,

Koessler, Karl K. See Milton Th. Hanke.

Köster, W. See Gustav Tammann.

Koetschau, Rudolf, the ozonides of petroleum, A., i, 977.

Kötz, Arthur, and H. Rathert, simultaneous reduction and oxidation. III. Transformation of halogenaldehydes into aldehydes and acids through ketenes, A., i, 236.

Kofler, Ludwig, surface activity and toxic action of saponins, A., i,

610. differentiation and estimation of saponins, A., ii, 595.

Kohl, C. See Fritz Mayer.

See Raoul Kohler, (Mlle) Denise. Combes.

Kohler, Elmer Peter, the addition of malonic esters to benzoylphenyl-

acetylene, A., i, 461. the action of bromine on certain δ-ketonic esters, A., i, 552.

Kohler, Elmer Peter, and L. I. Smith, the reaction between alkalis and certain nitrocyclopropane derivatives, A., i, 457.

Kohlschütter, Volkmar, and H. Schödl, I. The structure of electrolytically deposited nickel. II. The influence of superposed alternating current on the deposition and solution potential of nickel, A., ii, 648.

Kohlweiler, Emil, fractional diffusion of iodine vapour, A., ii, 497.

Kohn, Moritz, reducing actions of arsenious acid, A., ii, 143.

behaviour of ammoniacal and alkaline copper solutions, A., ii, 149.

Kohn, Moritz, and Anissim Mendelewitsch, symmetrical dibromopivalic acid and 1-methylcyclopropane-1carboxylic acid, A., i, 518.

Kohn, P. See Ludwig Moser.

Koizumi, Shungo, electrolytic oxidation of alcohols. I. isoAmyl alcohol, A., i, 979.

Kolkmeijer, N. H., crystal structure of germanium, A., ii, 713.

Kolligs, H. See Karl von Auwers.

Kollmann, Gustav, synthesis of uric a sid in the human organism, A., i. 293.

Kollo, Constantin. See Stefan Minovici. Kolmer, J. A. See J. F. Schamberg.

Kolthoff, I. M., the hydrolysis of antipyrine salicylate, A., i, 471.

the normal potential of silver, A., ii, 20. estimation of small quantities of bromides and chlorides in iodides, A., ii, 79.

the estimation of sulphates by means of a suspension of barium chromate, A., ii, 81.

the sensitiveness of coloured indicators at temperatures above the ordinary. A., ii, 156.

the separation of silver from mercurous salts, A., ii, 160.

the identification of lævulose in presence of aldoses, A., ii, 166.

electro-adsorption as a purely chemical process, A., ii, 197.

the salt error of coloured indicators, A., ii, 222.

the colorimetric estimation of hydrogenion concentration without buffer solutions, A., ii, 222.

the titration of moderately strong acids or bases in the presence of very weak ones, A., ii, 223.

potassium ferricyanide as a reagent in iodometry, A., ii, 224.

the argentometric titration of phos-

phoric acid, A., ii, 314. the application of the iodine electrode in potentiometric titrations, A., ii,

the application of conductometric methods to precipitation analysis, A., ii, 452.

qualitative reactions for arsenic, A., ii, 455.

potentiometric titrations of, and by means of, potassium ferrocyanide. I. The titration of potassium ferrocyanide by means of potassium permanganate, A., ii, 537.

the use of potassium ferrocyanide in potentiometric titrations. II. The potentiometric titration of zinc, A.,

ii, 580.

Kolthoff, I. M., electrometric titrations with silver nitrate; estimation of chlorides, bromides and iodides, and of iodides in the presence of chlorides and bromides, A., ii, 581.

electrometric titrations with mercury perchlorate, A., ii, 655.

electrometric titrations with lead

nitrate, A., ii, 781.
application of conductometric titrations to precipitation analysis. V.
Conductometric titrations with barium salts, A., ii, 864.

titration of boric acid in presence of phosphoric acid, A., ii, 867.

Kolthoff, I. M., and Ada Bak, the use of mercuric nitrate instead of silver nitrate in the estimation of the halogens, A., ii, 159.

halogens, A., ii, 159.

Kolthoff, I. M., and C. J. Cremer, the iodometric estimation of copper and arsenic present together, especially in Paris and Schweinfürth greens, A., ii, 86.

Kolthoff, I. M., and E. H. Vogelenzang, the acidimetric estimation of dichromate, A., ii, 88.

Komatsu, Shigeru, and Kozo Kashima, constitution of polysaccharides. I. Xylan and its acetyl derivatives. I., A., i, 811.

Komatsu, Shigeru, and Bunkichi Masumoto, catalytic reduction of d-camphor. I., A., i, 752.

Komm, E. See Alfred Heiduschka.

Komppa, Gustav, and R. H. Roschier, the camphenilone group. III. The homogeneity of apobornylene; apocyclene, a new tricyclic hydrocarbou, A., i, 1167.

Komuro, K., the minimum of odour perceptible in an absolutely inodorous space (camera inodorata), A., i, 84.

Kon, George Armand Robert, the formation and stability of spiro-compounds. VII. The application of the Dieckmann reaction to esters of the glutaric series, T., 513.

Kon, George Armand Robert, Arnold Stevenson, and Jocelyn Field Thorpe, ring-chain tautomerism. I. The occurrence and effect of keto-enol tautomerism between a ring compound and its open-chain isomeride, T., 650.

Kon, George Armand Robert, and Jocelyn Field Thorpe, a method for the preparation of οββ-trialkylated glutaric acids, T., 1795.

Kon, George Armand Robert. See also Frank Dickens.

Kondô, Heisaburô, Niichirô Kishi, and Chûrô Araki, constitution of matrine. II., A., i, 269.

Kondô, Heisaburô, Tomoichi Nakajima, and Gorô Murakawa, 4-nitrosalieylic acid, A., i, 745.

Kondô, Heisaburô, and Torizô Takahashi, condensation of collidine with acetaldehyde, A., i, 1177.

Kondo, Yoshio. See Yasuhiko Asahina. Kondyrev, N. V., electrolysis of organomagnesium compounds, A., i, 1128.

Konek, Fritz von, and Nikolans Szamák, hydrindones. I. The hydrindone of the vanillin series, A., i, 458.

Konen, H. See Leonhard Grebe.

Konishi, M., production of acetoacetic acid from urocanic acid in the surviving liver, A., i, 1211.

Konishi, M. See also Yashiro Kotake. Konrad, Erich. See Robert Schwarz.

Koopman, J., acetone in cerebrospinal fluid, A., i, 194.

Kopatschek, Fritz, action of uranyl acetate on some organic substances. I. Action of uranyl acetate on tartaric acid and its salts, A., i, 984.

Kopetschni, Eduard, and Herta Wiesler, a double decomposition catalysed by copper, A., i, 844.

a new mode of formation of thiazole derivatives of the anthraquinone series, A., i, 868.

Kornick, Erich. See Emanuel Merck. Koser, S. A., trehalose fermentation in the differentiation of the paratyphoidenteritidis group, A., i, 407.

Kostytschev, S., photosynthesis. I. The ratio of carbon dioxide to oxygen in carbon assimilation, A., i, 307.

photosynthesis. II. Does injury stimulate photosynthesis? A., i, 308.

photosynthesis. III. Does carbon assimilation take place during summer night in subarctic regions? A., i, 308.

photosynthesis. IV. Carbon dioxide assimilation by Leguminosæ, A., i, 613.

Kostytschev, S., and Paul Eliasberg, the invertase of Mucor racemosus, A., i, 410.

Kotake, Yashiro, the deamination of amino-acids and the reversible transformations of the products so arising in the animal organism, A., i, 1218.

Kotake, Yashiro, and M. Konishi, the production of urocanic acid from histidine in the dog, A., i, 1217.

Kotake, Yashiro, Y. Masai, and Yoshitane Mori, the behaviour of phenylalanine in the animal organism, A., i, 1217.

the behaviour of amino-acids in vitally stained animals. I. and II., A., i,

Kotake, Yashiro, Z. Matsuoka, and M. Okagawa, the deaminating of tyrosine the animal organism, A., 1218.

Kotake, Yashiro, and Yoshitane Mori, the behaviour of phenyl-lactic acid in the animal organism. I., A., i,

the behaviour of phenylpyruvic acid in the animal organism, A., i,

1216.

Kotake, Yashiro, and M. Okagawa influence of optical activity on cell permeability. I., A., i, 696. the excretion of hydroxyphenyl-lactic

acid after administration of tyrosine to rabbits, A., i, 1217.

Kozlowski, Antoine, formation of the red pigment of Beta vulgaris by oxidation of the chromogens, A., i. 96.

Kozlowski, Stanislas. See Stefan Dombrowski.

Kracker, H. See Otto Fischer.

Kraemer, O. See A. Schönberg. Krafft, K., barium compounds in the

viscera, A., i, 301.

Kraft, Edgar. See Wilhelm Schneider. Kraisy, Anton, re-testing the 100°-point of the saccharimeter. II. Preparation of chemically pure sucrose, A., ii, 233.

Kramer, Benjamin, and Frederick F. Tisdall, distribution of sodium, potassium, calcium, and magnesium between the corpuscles and serum of human blood, A., i, 1087.

Kramer, S. P., behaviour of \$\beta\beta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot\delta\cdot diethyl sulphide, A., i, 914.

Krase, Herbert J., simple formula for the calculation of the specific heats of solids, A., ii, 421.

Kratzer, A., determination of the terms of the cyanogen bands, A., ii, 4. regularities in systems of bands, A., ii,

409. Kraus, Charles August, Ghosh's theory of electrolytic solutions, A., ii, 256. equilibrium in mixtures of binary

electrolytes A., ii, 269. constitution of metallic substances,

A., ii, 566. Kraus, Charles August, and John Egbert Bishop, conductivity of solutions of ternary electrolytes in propyl alcohol, A., ii, 19.

CXXII. ii.

Kraus, Charles August, and John Egbert Bishop, conductivity of sodium iodide in amyl alcohol at very low concentrations, A., ii, 813.

Kraus, Charles August, and C. Y. Chiu, nature of the complexes formed between sodium and tellurium in liquid ammonia, A., ii, 765.

Kraus, Charles August, and Walter W. Lucasse, conductivity of concentrated solutions of sodium and potassium in liquid ammonia, A., ii, 252.

resistance temperature coefficient of concentrated solutions of sodium in liquid ammonia, A., ii, 734.

composition of the liquid phases in a univariant system, liquid-liquidvapour, for mixtures of sodium and ammonia, A., ii, 764.

Kraus, Charles August, and Edward H. Zeitfuchs, equilibrium in liquid mixtures of ammonia and xylene, A., i, 725.

Kraus, Ernst Josef, volumetric estimation of aluminium, A., ii, 87.

Krause, A. C. See Homer Adkins.

Krause, Erich, and Rudolf Nitsche, preparation of organic compounds of boron with the aid of boron fluoride. I. Boron alkyls and alkylboric acids, A., i, 22.

preparation of organic compounds of boron with the aid of boron fluoride. II. Boron triphenyl and phenylboric

acid, A., i, 694.

Krause, Erich, and Erich Pohland, the fluorides of organo-metallic compounds. II. Lead alkyl and aryl fluorides, A., i, 644.

Krause, Erich, and G. G. Reissaus, lead triaryl, a parallel to triphenylmethyl. III. Lead triphenyl, tri-p-tolyl and tri-o-tolyl and dark red lead diaryls, A., i, 602.

Krause, K. E. See P. P. Budnikov. Krause, Leonhard. See Arthur Rosen-

Krauss, F., ruthenium tetroxide, A., ii, 75.

Krauss, F. See also Alexander Gutbier. Krausz, Mathilde. See Franz Faltis.

Kreger, C. W. See Roger Adams. Kreidl, J.

See Walter Herzog. See Hermann Staudinger. Kreis, \widetilde{W} . Kreitz, Karl, cobalt-tungsten alloys, A., ii, 381.

Kremann, Robert, Franz Hemmelmayr, and Heinrich Reimer, influence of sub-

stitution in the components on equi-libria in binary solutions. XXXVI. The equilibria of dihydroxynaphthalenes with amines, A., i, 1010.

Kremann, Robert, Heinz Hohl, and Robert Müller, influence of substitution in the components on equilibria XXXV. The in binary solutions. binary systems of triphenylcarbinol with pyrogallol, nitrophenols, polynitrobenzenes, and phenylenediamines, A., i, 138.

Kremann, Robert, and Robert Müller, influence of substitution in the components on equilibria in binary solu-XXXIV. The binary systems of anthracene with nitro-derivatives

of benzene, A., i, 131.

Kremann, Robert, and Friedrich Odelga, influence of substitution in the components on equilibria in binary solu-XXXII. The binary systems tions. of camphor with phenols, A., i, 159.

Kremann, Robert, Friedrich Odelga, and Othmar Zawodsky, influence of substitution in the components on equilibria in binary solutions. XXXI. The binary systems of triphenylmethane with amines and phenols, A., i, 131.

Kremann, Robert, Wilhelm Rösler, and Wilhelm Penkner, dynamics of the formation of nitriles from acid anhydrides and amides. III. Reaction between benzamide and acetic anhydride, A., ii, 748.

Kremann, Robert, and Hubert Strzelba. influence of substitution in the components on equilibria in binary solu-XXXIII. The binary systems of carbazole or acenaphthene with polynitro-derivatives of benzene and toluene, A., i, 176.

Kremann, Robert, Alfred Zoff, and Victor Oswald, dynamics of the formation of nitriles from acid anhydrides and II. Kinetic study of the reaction between acetamide and acetic anhydride, using phase rule methods, A., ii, 748.

Kremers, Harry C. See C. C. Kiess. Kremers, Roland E., biogenesis of oil of peppermint, A., i, 357.

volatile oil of milfoil, A., i, 505. the volatile oil of Mentha aquatica, Linné, and a note on the occurrence of pulegone, A., i, 848.

Krestinski, V., magnesium compounds of the olefines. I., II., and III., A., i, 1128.

Kretz, Fritz, microchemical detection of tryptophan in the plant, A., ii, 668.

Krentzer, A. See Hans Tropsch. Křička, P. See Julius Stoklasa. Krieger, Wilhelm. See Fritz Mayer. Krishna, Sri, phenolcamphorein, T.,

Krishna, Sri, and Frank George Pope, the action of potassium iodide and iodate on some hydroxy-acids, T.,

Kritschevsky, J. L., the action of salvarsan on the serum of animals and on blood-cells in vitro, A., i,

Kröger, E. See Josef König.

Kröger, M., preparation of silicic acid and tungsten hydroxide sols by means of Hildebrand cells, A., ii, 212.

influence of tungstic acid on the gelatinisation of silicic acid in concentrated hydrochloric acid solu-

tions, A., ii, 213. Krönig, W. See *Rlothilde* Meier.

Kropf, Alfred, colorimetric estimation of vanadium in steel, A., ii, 590.

absorption of carbon monoxide by acid cuprous chloride solution in the presence of a reducing agent, A., ii, 657.

See Gesellschaft für Kruber, Otto. Teerverwertung.

Krüger, R. See Leonor Michaelis. Krull, H. See Alfred Wohl.

Krull, R., Causse and Bonnan's method for the estimation of dextrose, A., ii,

Kruyt, Hugo Rudolph, and H. G. de Jong, capillary-electric phenomena in lyophile sols, A., ii, 357.

Kryz, Ferdinand, colour reaction of sucrose, A., ii, 233.

See Giuseppe Krzszkowsky, Amantea.

Kuba, Franz. See Augustin Bistrzycki. Kudo, Yoshihiro. See Riko Majima.

Kühr, C. A. H. von Wolzogen, occurrence of sulphate reduction in the deeper layers of the earth, A., i, 1228.

Kürschner, E. See Emil Heuser.
Küster, William, the prosthetic group
of the blood pigments; hæmatin, A., i, 884.

bile pigments. XI. The preparation and purification of bilirubin from ox

gall-stones, A., i, 885. le pigments. XII. The action of bile pigments. diazomethane on bilirubin and biliverdin, the oxidation of bilirubin in alkaline solution, and the action of hydrogen bromide-acetic acid on bilirubin, A., i, 885.

Küster, William [with H. Maurer, W. Niemann, P. Schlack, Schlayerbach W. Weber, and Willig], derivatives

of pyrrole, A., i, 857.

Küster, William, and Adolf Gerlach, the prosthetic group of blood pigment; formoxyhæmin, A., i, 596.

Küster, William, and Walter Herrmann, bile pigments. XIII. Hexachlororubilic acid, A., i, 886.

Kugelmass, I. Newton, a new apparatus; the nephelectrometer, A., ii, 692.

Kuhn, Alfred, swelling of gelatin in aqueous solutions of organic acids, A., i, 183.

Kuhn, Alfred. See also WolfgangOstwald.

Kuhn, Richard. See Richard Willstätter.

Kulp, W. L. See R. J. Anderson. Kumagawa, H., the dismutation of various aldehydes by yeast, A., i, 305. the action of salts on the bleaching of methylene blue by various species of yeast, A., i, 306.

decomposition of inositol and glycerol after the manner of true sugars by Bacillus lactis aerogenes, A., i, 972.

production of the second and third forms of fermentation with Saccharomyces saké, Zygosaccharomyces major, and Z. salsus, A., i, 972.

Kunerth, William, solubility of carbon dioxide and nitrous oxide in certain

solvents, A., ii, 823.

Kunsman, C. H. See C. Davisson. Kunz, Alphons. See Géza Zemplén. Kunz, Jakob. See E. H. Williams. Kunz, K. See Paul Friedländer. Kunze, Rudolf. See Paul Hirsch.

Kunz-Krause, Hermann, occurrence of ellagic acid in Rubus idæus; cause of the clouding of raspberry juice, A., i, 210.

Kunz-Krause, Hermann, and Paul Manicke, the action of mercurous formate on certain aliphatic halogen

compounds, A., i, 6.

elimination of carbon dioxide from compounds. VI. The action of the light of the electric arc on aqueous oxalic acid solutions in presence of ferric, chromic, and mercuric chloride, of uranyl acetate, and of iodic acid, A., ii, 731.

Kupfer, O. See Hermann Staudinger. Kuppinger, O. See Alexander Gutbier. Kurnakov, Nicolai S., and G. Urasov, the toxic properties of commercial

ferrosilicon, A., ii, 845. Kuroda, Chika. See Riko Majima. Kuroda. Sajûrê. See Jirê Takeda. Kurre, Bruno. See Gustav F. Hüttig.

Kurtenacker, Albin, and Albert Fritsch, the analysis of polythionates, A., ii, 521.

Kurtenacker, Albin, and Josef Wagner, the volumetric estimation of hydroxylamine and hydrazine, A., ii, 312.

Albin,and Felicitas Kurtenacker. Werner, the estimation of bismuth as metal, A., ii, 877.

Kurth, E. H., extension of the X-ray spectrum to the ultra-violet, A., ii, 410.

soft X-rays of characteristic type, A., ii, 809.

Kurtz, S. S., jun. See James Bryant Conant.

See Yasuhiko Satoru. Kuwada, Asahina.

Kyropoulos, S., metallographic investigations on the cathodic deposition of metals on aluminium and chromium, A., ii, 22.

L

L., purging nut-tree oil, A., i, 908. Laar, Johannes Jacobus van, space-filling and the equation of condition, A., ii, 279.

FriedrichR. van der. See Laar, Kehrmann.

La Barre, J. See Edgard Zunz.

Labat, A., and M. Favreau, chemical composition of amniotic fluid, A., i, 894.

Labbé, Henri, F. Nepveux, and Ménélas Nomidis, critical study of Bang's method for the estimation of reducing substances in blood, A., ii, 663.

Labes, Richard, increased velocity and intensity of action of groups of poisons or active drugs on bacteria and tadpoles produced by variation of the degree of acidity or alkalinity, A., i, 901.

the beneficial action of charcoal suspensions and other substances with large surface development, as colloidal silica, ferric phosphate, and agar-agar, on the formation of fermentation gases by Bacillus coli in protein-free nutrient media, A., i, 902.

Laborde, $L\acute{e}on$ Jaloustre, and M. Leulier, influence of radioactive substances on

acetic fermentation, A., i, 1219.

Lachartre, detection of iodates potassium iodide according to the French codex, 1908, A., ii, 716.

A., i, 107. Arthur, nitromalic

dihydroxytartaric acid, A., i, 109. the rearrangement of benzil to benzilic acid, A., i, 459.

Lachs, Hilary, and Stephanie Goldberg, influence of temperature on the coagulation of colloidal gold, A., ii, 697.

Lachs, Hilary, and Mathilde Wertenstein, the distribution of radioactive substances in solutions, A., ii,

Ladenburg, Rudolf, action of electrical fields on absorption lines (D-lines of sodium vapour), A., ii, 6.

effect of a strong electrical field on the absorption lines of sodium vapour, A., ii, 6.

Ladenburg, Rudolf, and R. Minkowski, chemical constants of sodium and

potassium, A., ii, 191.

heat of vaporisation of sodium and the probability of the transition of the sodium atom from the resonance to the normal condition on the basis of optical measurements, A., ii, 194.

Laer, Marc H. van, action of hydrolytic enzymes. II., A., i, 64.

Laer, Marc H. van, and R. Lombaers, the formation of osazones, A., i,

Laidlaw, Patrick Playfair, and Wilfred Walter Payne, estimation of small quantities of calcium, A., ii, 786.

Laidlaw, Patrick Playfair. See also Charles Stanley Gibson.

Laing, (Miss) Mary Evelyn. See James William McBain.

Lal. Rattan. See Bawa Kartar Singh. Lamb, Arthur Becket, Charles C.Scalione, and Graham Edgar, precatalytic combustion of carbon monoxide in hydrogen, A., ii, 443.

Lamb, Arthur Becket, and John P. Simmons, heats of solution and of transformation of the acido- and aquo-cobalt pentammines, A., ii, 121.

Lamb, Arthur Becket, and Victor Yngve, strengths of cobaltammine bases and Werner's theory of bases, A., ii, 217.

Lambourne, Herbert, derivatives of

methylstannonic acid; their bearing upon its constitution, T., 2533.

Lambris, G., estimation of very small quantities of injurious acids in air,

A., ii, 390.

LaMer, Victor K., vitamins from the point of view of physical chemistry, A., i, 281.

LaMer, Victor K., and Lillian E.
Baker, effect of substitution on the
free energy of oxidation-reduction
reactions. I. Benzoquinone derivatives, A., ii, 735.

LaMer, Victor K., H. L. Campbell, and Henry Clapp Sherman, the effect of temperature and the concentration of hydrogen ions on the rate of destruction of antiscorbutic vitamin (vitamin-C), A., ii, 275.

LaMer, Victor K. See also Henry Clapp Sherman.

Landauer, Max. See Heinrich Lüers. Landauer, Robert S. See Gerald L. Wendt.

Landau-Ziemecki, St., the emission spectrum of monatomic iodine vapour, A., ii, 674.

Landergren, Sture. See Hans von Euler.

Landrieu, Philippe, a new class of active racemic substances, A., i, 808.

Llandrivon, J. See J. Altwegg.

Landsteiner, Karl, heterogenetic antigen and hapten. XV., A., i, 195.

Lang, Norbert. See Ernst Späth.

Lang, Rudolf, a new iodometric method for the estimation of copper, A., ii, 318.

a new iodometric method based on the formation and the estimation of cyanogen iodide, A., ii, 782.

Lange, Carl, errors in the estimation of sugar by fermentation with yeast, A., ii, 93.

Lange, H. See Karl von Auwers.

Lange, Hermann, the influence adrenaline on the permeability of the limiting membrane of muscle fibres, A., i, 791.

Lange, Hermann, and Max Simon, the liberation of phosphoric acid by the retina in the presence of light, A., i, 701.

Langecker, *Hedwig*, the practice of precipitation with lead, A, i, 315. Langhans, pyrofulmin, a decomposition

product of mercury fulminate, A., i, 328. Langley, Wilson D., and Roger Adams, condensation of certain nitriles and

various polyhydroxyphenols to form phenolic acids, A., i, 1153.

Langmuir, Irving, types of valency, A., ii, 137.

catalysis with special reference to newer theories of chemical action. II. Heterogeneous reactions; (1) chemical reactions on surfaces; (2) the mechanism of the catalytic action of platinum in the reactions

 $2CO + O_2 = 2CO_2$, and $2H_2 + O_2 = 2H_2O$, A., ii, 629.

Langstein, *Leo*, are the carbohydrate groups which appear in the acid hydrolysis of blood globulin a fission product of the protein molecule? A., i. 479.

Langton H. M., saponification of oils and fats, A., i, 982.
Lansberg, L. M. See H. J. Lemkes.

Lantz, K. See André Wahl. Lapicque, L., and L. Emerique, variations in the chemical composition of Fucaceæ, A., i, 413.
Lapkamp, K. See Rud. Seeliger.

Lapworth, Arthur, a theoretical derivation of the principle of induced alternate polarities, T., 416.

Lapworth, Arthur, and John Alexander McRae, syntheses of alkylidenecyanoacetic acids and of substituted succinic acids. I. Acids containing aromatic residues, T., 1699.

resorcinolphenylsuccinein, T., 2722.

syntheses of alkylidenecyanoacetic acids and of substituted succinic acids. II. Preparation of acids coutaining saturated aliphatic residues and the constitution of the aliphatic alkylidenecyanoacetic esters, 2741.

Lapworth, Arthur, and John Baldwin Shoesmith, reciprocal induced polarity effects in cresols and their derivatives; properties of the isomeric methoxybenzyl bromides, T., 1391.

Lapworth, Arthur. See also Robert Downs Haworth, and (Miss) Lucy

Higginbotham.

Laquer, Fritz, the degradation of carbohydrates in transversely striated muscles. I. and II., A., i, 298,

a micro-extraction apparatus, A., ii,

Laqueur, Ernst. See J. Snapper.

Larson, Alfred T., and Ernest C. White. method of determining traces of oxygen in hydrogen, A., ii, 311. Larsonneau, A. See A. Goris.

Lasarev, P., investigations on the fundamental law of photochemistry, A., ii, 103.

fundamental laws of photochemistry. II. Influence of cooling on the absorption of light by dyes. A., ii, 332.

Laschtschenko, Porphyry Nicolaevitch, polymorphism of arsenic, T., 972.

Lasnitzki, A. See Peter Rona. Lassieur, Arnold. See André Kling.

Lassieur, (Mme) Arnold. See André Kling.

Lassmann, Max. See Hans Pringsheim. Latiers, G., symmetrical di-iodoethylenes, A., i, 314.
Latimer, Wendell M., distribution of

thermal energy in the quadrivalent chlorides of carbon, silicon, titanium, and tin, A., ii, 256.

Latimer, Wendell M., thermo-electric force, the entropy of electrons and the specific heat of metals at high temperatures, A., ii, 814.

Latimer, Wendell M. See also Gilbert

Newton Lewis.

Lau, E. See Ernst Gehrcke.

Laurent, (Mlle) Y. See P. Freundler. Lauterbach, Hans. See Erich Müller.

Lauth, Hilde. See Gustav Heller. Lavers, Herbert, tungsten, A., ii, 164.

Lavoye, use of resorcinol in qualitative inorganic analysis, A., ii. 779.

Lawaczeck, Heinz. See Gustav Embden. La Wall, Charles H. See HeberYoungken.

Lawrance, Walter A., Friedel and Crafts' reaction; some substituted phthalic anhydrides with toluene and aluminium chloride, A., i, 340.

Lawrance, Walter A., and Harold G. Oddy, Friedel and Crafts' reaction; diphenyl and ditolyl tetrahalogen phthalides, A., i, 455.

Lax, E. See Marcello von Pirani.

Lax, Heinrich, micro-estimation of total acetone in urine, A., ii, 326.

Lax, Heinrich. See also Géza Petényi. Leavenworth, Charles Samuel. Thomas Burr Osborne.

Le Bas, Gervaise, negative optical anomalies, A., ii, 9.

relation between atomic volumes [of elements in combination] and optical refractivities, A., ii, 241.

Lebeau, P., the oxides of uranium, A., ii, 302.

Lebeau, P., and M. Picon, action of sodammonium on pyridine; preparation of the hydrate of tetrahydrodipyridyl, A., i, 48.

the action of sodammonium on hydrocarbons, A., i, 801.

Le Brazidec, Emilien, some derivatives of anisylacetone (methoxyphenylpropanone) [p-methoxybenzyl methyl ketone], A., i, 456.

Le Breton, (Mlle) Eliane, presence and estimation in the total lipoid ethersoluble phosphorus of phosphorus compounds other than phosphatides, A., ii, 168.

Le Chatelier, Henri, the manufacture of sodium carbonate by the ammonia process, A., ii, 375.

the geometric representation of saline equilibria, A., ii, 555.

Lecher, Hans, and Alfred Goebel, disulphur dithiocyanate. A., i, 640.

Lecher, Hans, and Josef Hofmann, hydroxylamine. I. Simple method of preparation of free hydroxylamine, A., ii, 442.

Lecher, Hans, and Kurt Simon, the valency problem of sulphur. VII. o-Nitrophenyldithiochloride, 1013.

Lecher, Hans, and Max Wittwer, sulphur thiocyanate, A., i,, 640.

alkylthiol thiocyanates. II., A., i, 641. Lechinsky, Wolfyang. See Max Bergmann.

Lecoq, Raoul, the diastatic action of malt and its preparations (liquid, syrupy, and dried extracts), A., i, 312.

Ledbury, Wilfrid. See Gilbert Thomas Morgan.

Lee, Henry, R., the estimation of Hacid, A., ii, 235.

Lee, Henry R., and De Witt O. Jones, the analysis of B-naphthylamine, A., ii, 883.

See also De Witt O. Lee, Henry R. Jones.

Lee, Olive P., and Shiro Tashiro, alkaligenesis. II. Ammonia production in muscle, A., i, 1089.

Leendertz, G., and B. Gromelski, the estimation of fibrinogen; protein estimations in salt plasma; question of the utility of serum for the quantitative investigation of blood, A., ii, 798.

David Alliston. See Matthew Legg, Atkinson Adam.

Le Heux, J. W., choline as hormone for intestinal movement. III. Participation of choline in the action of various organic acids on the intestine. Effect of choline on normal gastric movement, A., i, 85.

Lehman, Edwin, P., inorganic blood

phosphate, A., i, 191.

Lehmann, Fritz. See Ernst Beckmann. Lehmann, Jörgen, the inhibition of blood coagulation by barium, strontium, and calcium chlorides, A., i, 892.

Lehmann, Otto, structure of [hanging] drops of mixed liquid crystals, A., ii, 201.

state of aggregation and liquid crystals, A., ii, 692.

Lehner, Friedrich, a test for pyridine, A., ii, 795.

Lehrman, S. See W. H. Martin.

Leichtentritt, Bruno, and Margarete Zielaskowski, the growth promoting factor of lemon juice, A., i, 1094.

Leimbach, G. See Friedrich L. Hahn. Leitch, (Miss) Grace Cumming. Walter Norman Haworth.

Lejeune, B. See Georges Chavanne.

Lemay, Pierre, and Léon Jaloustre, the oxidising properties of certain radioactive elements, A., ii, 13.

Lemay, Pierre, and Léon Jaloustre, some oxidising properties of thorium-X, A., ii, 186.

Lemeland, P., chemical and physiological investigation of the fats and lipoids of the blood. II. The Kumagawa-Suto method of estimation of lipoids, A., ii, 666.

Lemkes, H. J., and L. M. Lansberg, Causse-Bonnan's method for the esti-

mation of dextrose, A., ii, 724. Lemmermann, Otto, and Ludwig Fresenius, soil acidity and its effect on germinating plants, A., i, 510.

Lemmermann, Otto, and H. Wiessmann, effect of silicic acid on crop production in the presence of insufficient amounts of phosphoric acid, A., i, 1103.

Le Moal. See Warcollier.

Lenher, Victor, some properties of selenium oxychloride. II., A., ii, 706. selenium oxybromide, A., ii, 707.

Lenher, Victor, Gilbert B. L. Smith, and George G. Town, vapour pressure of selenium oxychioride, A., ii, 371.

Lenher, Victor, Hosmer W. Stone, and Helen H. Skinner, formation of potassium perchlorate from potassium chlorate, A., ii, 287.

Lenher, Victor, and Martin Tosterud. rapid analysis of potassium perchlorate, A., ii, 395.

Leonard, Clifford Shattuck, some compounds of piperidine with haloids, Ä., i, 362.

diethylrhodanine, A., i, 1182.

Leonard, Helen A. See Burt E. Nelson. Leone, P., and E. Angelescu, oil of Saturcja montana of Italian origin, A., i, 357. oil of Thymus vulgaris of Italian

origin, A., i, 357.

Italian oil of Thymus striatus, A., i, 460.

variations in the solubility of a compound in presence of other compounds. I. Water-phenol-diphenols, A., ii, 743.

Leone, P., and M. Benelli, variations in the solubility of a compound in presence of other compounds. II. Water-epichlorohydrin-acetic acid, A., ii, 744.

Leopold, Ludwig. See Georg Sachs. Lepape, Adolphe. See Charles Moureu. Lepehne, tests for liver function, A., ii, 800.

Lepeschkin, W. W., the coagulation of proteins by heat, A., i, 1198.

Lepin, A. I., interaction of carbon tetrachloride and fuming sulphuric acid, A., ii, 847.

Lepin, Lidie. See Nikolai Schilov. Leroide, J., some properties of aa-disubstituted esters, A., i, 215.

Lespieau, Robert, derivatives of acetylenic erythritol [hexinene-aβεζ-tetrol], HO·CH₄·CH(OH)·C:C·CH(OH)· CH₂·OH, A., i, 103.

action dichloroethyl CH₂Cl·CHCl·OEt, on the mixed magnesium derivative of allyl bromide, A., i, 619.

Lesser, Ernst J., the spacial separation

of glycogen and diastase in the liver

cells, A., i, 195.

Leuchs, Hermann, Eva Conrad, and Hans von Katinszky, spirans. IX. Preparation of bishydrocarbostyril-3:3-spiran and its by-products, A., i, 471.

spirans. X. Proof of the peculiar spiran asymmetry by the preparation of an optically active spiran, A., i, 873.

Leuchs, Hermann, and Kurt Fricker, strychnos alkaloids. XXXII. Transformations of the quinones from brucinesulphonic acid. I., A., i, 677.

Leuchs, Hermann, and Hans Kaehrn, strychnes alkaloids. XXXI. Violet and green colour reactions of cacotheline, A., i, 463.

Leuchs, Hermann, Hans Mildbrand, and W. Robert Leuchs, strychnos alkaloids. XXXIII. The degradation of cacotheline by bromine, A., i, 1052.

Leuchs, Hermann, and Rudolf Nitschke, strychnos alkaloids. XXXIV. The preparation of isostrychnine, A., i, Ī175.

Leuchs, Hermann, Fritz Osterburg, and Hans Kaehrn, strychnos alkaloids. XXX. Reactions of cacotheline, A., i, 362.

Leuchs. W. Robert. See Hermann Leuchs.

Leue, H. See Karl Fries.

Leulier, M. See Laborde.

Levaditi, C. See Robert Sazerac.

Levalt-Ezersky, M., thermochemistry of solutions, A., ii, 819.

Levene, Phæbus A., synthesis of 2hexosamic acids and 2-hexosamines,

A., i, 327. ethyl benz benzylidenechitosamate and ethvl diazobenzylidenegluconate (mannonate), A., i, 1028.

preparation and analysis of animal nucleic acid, A., i, 1075.

Levene, Phoebus A., and Gustave Morris Meyer [with I. Weber], phosphoric esters of some substituted glucoses and their rate of hydrolysis, A., i, 987.

Levene, Phæbus A., and Gustave Morris
Meyer [with I. Weber], sulphuric esters of some substituted glucoses and their rates of hydrolysis, A., i, 987.

Phæbus A., and Louis A. Mikeska, possible asymmetry of aliphatic diazo-compounds. II., A., i, 818.

Levene, Phabus A., and Ida P. Rolf, the unsaturated fatty acids of egg lecithin, A., i, 621.

Levene, Phæbus A., and H. S. Simms, the unsaturated fatty acids of liver lecithin, A., i, 424.

Levene, Phæbus A., and F. A. Taylor, synthesis of a-hydroxyisopentacosoic acid and its bearing on the structure of cerebronic acid, A., i, 714.

Lévêque, A., estimation of the alcohol content of a solution, A., ii, 723.

Levi, Giorgio Renato, chlorites of amtetramethylammonium, monium, and certain amines, Α., 527.

chlorites of sodium and other metals, A., ii, 567.

oxidation and reduction reactions with chlorites, A., ii, 567.

Levi, Mario Giacomo, formation of hydrocarbons from carbon monoxide and from formates, A., i, 801.

Levine, M., bacteria fermenting lactose, and their significance in water analysis, A., i, 901.

Levine, Victor E., Elmer Verner Mc-Collum, and Nina Simmonds, glacial acetic acid as a solvent for the antineuritic substance, water-soluble B, A., i, 975.

Levinstein, Herbert. See British Dye-

stuffs Corporation, Ltd.

Lewcock, William, William Gordon Adam, Norman Edward Siderfin, and William Lyle Galbraith, preparation of amino-phenols or aromatic aminoacids, A., i, 650.

Lewin, L., and E. Stenger, spectrographic detection of change in blood pigment due to certain organic and inorganic poisons, and the characteristic spectra of yolk of egg and urobilin, A., ii, 414.

Lewis, Edgar, the composition of the residue on distillation of crude glycerin, A., i, 419.

Lewis, E. P., the continuous spectrum of hydrogen in the Schumann region,

A., ii, 802. Lewis, Gilbert Newton, and Wendell M. Latimer, revision of the entropies of the elements, A., ii, 471.

Lewis, Howard B., and Daniel A.
McGinty [with Lucie E. Root], metabolism of sulphur. V. Cysteine as an intermediary product in the metabolism of cystine, A., i, 1088. Lewis, Howard B., and Lucie E. Root,

metabolism of sulphur. IV. The oxidation of cystine in the animal

organism, A., i, 487. Lewis, Howard B. See also Max S. Dunn.

Lewis, J. Volney, and Lawson H. Bauer, cyprine and associated minerals from Franklin, New Jersey, A., ii, 714. Lewis, J. W. See Thomas Barratt.

Lewis, Samuel Judd, the ultra-violet absorption spectra and the optical rotation of the proteins of blood sera, A., ii, 245.

the quantitative determination of the fluorescent powers (the spectrofluorescometry) of cellulose, sugars, and other substances, A., ii, 334.

Lewis, Samuel Judd, and Florence Mary Wood, a new adjustable thermostat for all temperatures between 0° and 100°, A., ii, 612. Lewis, William Cudmore McCullagh,

radiation and chemical action, A.

ii, 336.

catalysis with special reference to newer theories of chemical action. I. The radiation theory of chemical action. (2) The radiation hypothesis of chemical reactivity and some of its applications, A., ii,

Lewis, William Cudmore McCullagh. See also J. W. Corran, Thomas Moran, and Henry Austin Taylor. Lewis, W. Lee, and H. C. Cheetham,

arsenated benzophenone and its deriv-

atives, A., i, 187. Lewis, W. Lee, and Cliff S. Hamilton, 7-chloro-7:12-dihydro-y-benzophenarsazine and some of its derivatives, A., i, 187.

Lewy, F. H. See K. Dresel.

Lexow, Thor, sea-wolf liver oil, A., i,

oil from the liver of Acanthias vulgaris, A., i, 490.
Ley, Heinrich, and R. Grau, complex

tautomerism. A., i, 536.

Ley, P. See Eberhard Rimbach.

Leys, Alexandre, a rapid method for determining the acetyl value of oils and fats, A., ii, 167.
Leyser, Felix. See Arthur Rosenheim.

Lieb, Hans. See Josef Herzig.

Lieben, Fritz, the destruction of lactic acid by yeast-cells, A., i, 796.

Lieben, Fritz, behaviour of some aminoacids towards oxygenated yeast, A., i, 1219.

Lieben, Fritz. See alse Otto von Fürth. Liebermann, Ludwig. See Carl Neuberg.

Liempt, J. A. M. van, the green colour of tungsten trioxide, A., ii, 73.

the equilibrium of tungsten and its oxides with hydrogen and water vapour; carbon monoxide and carbon dioxide and oxygen, A., ii, 301.

the binary systems, $Na_2SiO_3-Na_2WO_4$, $K_2SiO_3-K_2WO_4$, and Na_2WO_4- K₂SiO₃-K₂WO₄, and K₂WO₄, A., ii, 775.

a new microchemical method for the identification of tungsten, A., ii,

Liesche, Otto. See Ernst Beckmann. Liesegang, Raphael Ed., a reversible

turbidity phenomenon, A., ii, 369. Liévin, O., kinetic study of alkaline solutions of iodine, A., ii, 359.

Lifschitz, Israel, the formation of salts from aromatic nitro-compounds, A., i, 737.

Lifschitz, Israel, and Georg Beck, optics of disperse systems. V., A., ii, 597. Lifschitz, Israel, and B. B. Hepner,

colour isomerism and salt formation with iminovioluric acids. II., A., i, 767.

Lifschütz, Isaac, cholesterol dibromide, A., i, 251.

the degradation products of cholesterol in the animal organs; (substances associated with cholesterol in the blood), A., i, 392.

the chemical nature and the transformation of the fat of the blood, A., i, 392.

metacholesterol and its by-products. III., **A**., i, 541.

Light, Louis, and Frank Lee Pyman, bromo-derivatives of 2-methylgloxaline, T., 2626.

Limann, G., visible refraction and dispersion in aqueous solutions of salts, particularly coloured salts, A., ii, **173.**

Lind, Samuel Colville. See R. E. Nyswander.

Lindahl, Gunnar. See Erik Matteo Prochet Widmark.

Lindberg, Ernst, activators of fermentation, A., i, 1219.

Linderström-Lang, K. See Sören Peter Lauritz Sörensen.

Lindgren, Waldemar, melanovanadite, a new mineral from Peru, A., ii, 155.

Lindgren, Waldemar, Leicester F. Hamilton, and Charles Palache, melanovanadite, a new mineral from Peru, A., ii, 305.

Lindh, Axel E., Röntgen absorption spectrum of chlorine, A., ii, 177. the absorption spectrum of sulphur

for X-rays, A., ii, 542.

Lindh, Axel E. See also Arne West-

Lindhard, J., colorimetric estimation of the concentration of hydrogen ions in very small quantities of blood by dialysis, A., ii, 240.

Lindner, (Frl.). See Max Bodenstein. Lindner, Egon. See Waclaw Morac-

zewski.

Lindner, Josef, the course of the quinaldine synthesis with 6-aminotetrahydroquinoline and 6-aminokairoline, A., i, 687.

volumetric estimation of carbon and hydrogen in organic compounds,

A., ii, 657.

Lindner, Kurt [with Emma Haller, Herbert Helwig, Antonie Köhler, and Hellmuth Feit], the chlorides of bivalent molybdenum, tungsten, and

tantalum. I., A., ii, 509. Lindner, Paul. See Gustav Heller.

Lindsay, the limits of absorption L of the elements barium to antimony, A., ii, 599.

Lineberry, R. A. See Francis P. Venable.

Ling, Arthur Robert [with E. H. Callow, and W. J. Price], estimation of starch. I. Estimation of starch in barley and in wheat, A., ii, 879.

Ling, Arthur Robert, and John Herbert Bushill, the estimation of calcium in

blood, A., ii, 587.
Ling, Arthur Robert, and Dinshaw
Rattonji Nanji, crystalline glucoseammonia and isoglucosamine, T., 1682.

the longevity of certain species of yeast, A., i, 92.

new method of preparing gluconic acid, A., i, 221.

the action of ammonia and of aminocompounds on reducing sugars. I. The action of ammonia on dextrose and lævulose, A., i, 631.

the synthesis of glycine from formaldehyde, A., i, 1124.

Ling, Arthur Robert, and William John Price, a "micro-Kjeldahl" method of estimating nitrogen, A.,

Lingen, J. Steph. van der, fluorescence of cadmium vapour, A., ii, 181.

Lingen, J. Steph. van der, the fluorescence of mercury vapour excited by Röntgen rays, A., ii, 543.

Lingen, J. Steph. van der, and Robert Williams Wood, the fluorescence of

mercury vapour, A., ii, 245.

Linhart, George Augustus, relation between entropy and probability; integration of the entropy equation, A., ii, 257, 738.

Linstead, Reginald Patrick. See Kenneth Claude Devereux Hickman.

Liot, A. See A. Goris.

Liotta, Domenico, modification in the process of extraction of alkaloids, A., ii, 404.

Lipman, Jacob Goodale, Selman A. Waksman, and Jacob S. Joffe, the oxidation of sulphur by soil organisms, A., i, 303.

Lipp, Peter, comparison of a-campholanic acid with Mahla and Tiemann's dihydrocampholenic acid and with isocampholic acid, A., i, 735.

Lippmann, Edmund Oskar von, the history of [ethyl] alcohol, A., i,

botanical chemical observations, A., i, 311, 1223.

Lipschitz, Werner, and A. Gottschalk, reduction of the aromatic nitro-group as indicator of partial processes of respiration and of fermentation; a method for the comparative estimation of biological oxido-reduction. I. Experiments with respiring cells. II. Experiments with fermenting cells, A., i, 298.

See Fritz Mayer. Listmann, F.

Liversedge, Samuel G., and F. Andrews, rapid estimation of quinine salts, A., ii, 669.

Livingston, Marguerite B. See David I. Macht.

Lizius, John Leonard, and Norman Evers, titration of acids and bases, A., ii, 654.

Lloyd, Dorothy Jordan, some properties of dialysed gelatin, A., i, 1075.

Lloyd, Dorothy Jordan, and Charles Mayes, the titration curve of gelatin,

A., i, 280.

Locher, F. See Paul Karrer.

Lochte, Harry L., James R. Bailey, and
William Albert Noyes, symmetrical disopropylhydrazine and its deriva-

tives, A., i, 329. Lockemann, G. See Paul Jacobsen. Lockemann, Georg, rotary burner with fixed gas connexion, A., ii, 43.

Locket, George Hazlewood. See Dalziel Llewellyn Hammick.

Lockrow, Laurice L., the effect of oxygen and hydrogen on the emission of electrons from hot platinum, A., ii,

Locquin, Réné, and Sung Wouseng, the action of acetylene on the sodium derivatives of ketones and the preparation of dialkylethinyl-carbinols, A., i, 617.

The preparation of dialkylvinyl-

the preparation of dialkylvinyl-carbino's, A., i, 710. transformation of tertiary ethylenic

alcohols (linalool type) into primary ethylenic alcohols (geraniol type), A., i, 710.

the preparation of aldehydes from tertiary alcohols, A., i, 810.

Lodge, (Sir) Oliver, Bohr and Langmuir atoms, A., ii, 701.

speculations concerning the positive electron, A., ii, 836.

Loeb, A. See Paul Jacobsen.

Loeb, Jacques, the significance of the isoelectric point for the preparation of ash-free gelatin, A., i, 387.

discrepancies between the observed and calculated potential difference of protein solutions near the isoelectric point, A., i, 692.

ionising influence of salts with tervalent and quadrivalent ions on crystalline egg-albumin at the isoelectric point, A., i, 881.

the mechanism by which tervalent and quadrivalent ions produce an electrical charge on isoelectric protein, A., i, 882.

the influence of aggregates on the membrane potentials and osmotic pressure of protein solutions, A., i, 883.

the origin of the potential differences responsible for anomalous osmosis, A., ii, 124.

electrical charges of colloidal particles and anomalous osmosis, A., ii, 354.

electrical charges of colloidal particles and anomalous osmosis. II. Influence of the radius of the ion, A., ii, 467.

cataphoretic charges of collodion particles and anomalous osmosis through collodion membranes free from protein, A., ii, 742. interpretation of the influence of acid

on the osmotic pressure of protein solutions, A., ii, 742. the influence of electrolytes on the

cataphoretic charge of colloidal particles and the stability of their suspensions. I. Experiments with collodion particles, A., ii, 746.

Loeb, Jacques, and Robert F. Loeb, the influence of electrolytes on the solution and precipitation of casein and gelatin. A., i, 182.

Loeb, Leonard B., and Lloyd Schmiedeskamp, destruction of phosphorescent zinc sulphides by ultra-violet light, A., ii, 8.

Loeb, L. Farmer, caffeine concentration of the blood and urine of rabbits after parenteral administration, A., i. 705.

Loeb, Robert F. See Jacques Loeb, and Walter W. Palmer.

Löffelbein, Willi, estimation of chromium in metals, A., ii, 660.

Löfmann, Nils. See Erik Hägglund. Loening, E. See Herbert Freundlich. Löpmann, Bernhard. See Erwin Ott. Lösch, Joseph. See Wilhelm Prandtl.

Lösenbeck, Otto, electrical properties of silicic acid sols, A., ii, 695.

Lövgren, Sture, urease, A., i, 185. Löw, Artur. See Paul Dux.

Löwe, Hans. See Franz Fichter. **Loewe**, S., physical chemistry of lipoids; diffusion of methylene-blue through organic solvents, A., ii, 354.

Loewi, Otto. See E. Geiger. Lohmann, W. See Karl Fries. Lohsner, Artur. See Jakob Meisenheimer.

Loisel, P., the existence of a new radioactive emanation in the springs of Bagnoles-de-l'Orne and its surroundings, A., ii, 15.

Lombaers, R. See Marc H. van Laer. Lombard, Maurice, the action of nitrous acid on iodides in the presence of oxygen, A., ii, 313.

Lombroso, Ugo, action of hydrochloric acid on the fat exchange in the surviving liver, A., i, 702.

Lommen, Frederick W. M. See Morris S. Kharasch.

Long, Esmond R., chemical problems in the bacteriology of tubercule bacillus, A., i, 1095.

Long, M. Louisa. See Norman R. Blatherwick.

Longchambon, Henri, spectral study of the triboluminescence of sucrose, A., ii, 542.

Longchambon, Louis, the rotatory power of crystals and molecular rotatory power, A., ii, 603.

Looker, Cloyd D. See William Lloyd

Loomis, Albert G., system ammoniamagnesium-mercury; formation of magnesium hexammoniate, A., ii, 294.

Loon, Chr. van. See Jacob Böese-

Looney, Joseph M. See Otto Folin.

Lorenz, Richard, the theory of electrolytic ions. XXVI. How is the limiting value of the molecular conductivity of strong electrolytes determined? A., ii, 19.

kation volumes in permutite, A., ii,

196.

of the alkali metals and radii the alkali metal ions, A., ii, 211.

Lorenz, Richard, Walter Fraenkel, and M. Wormser, electrochemical investigations of gold-copper mixed crystals, A., ii, 21.

Lorenz, Richard, and Gustav Haegermann, the discovery of an equilibrium between cement and lime-water, A.,

ii, 59.

Lorenz, Richard, and Walter Herz, surface tension of corresponding states, A., ii, 261.

the relation of melting point to boiling point, A., ii, 739.

Lormand. Ch. See Fayolle, and Maurice François.

Losana, Luigi, colorimetric estimation of phosphorus, A., ii, 392.

rapid estimation of sulphur, A., ii, 582, 656.

estimation of selenium, A., ii.

Losana, Luigi, and Enrico Carozzi, estimation of chromium in steels, A., ii, 589.

rapid analysis of ferro-tungsten, A., ii, 661.

Losanitch, Sima M., decomposition of dithiocarbazinates, T., 2542.

Lottermoser, Alfred, technical estimation of the colloidal part of tungsten powder, A., ii, 230.

freezing of hydrosols, A., ii, 266.

electrolytic removal of alkali from salts, A., ii, 510.

Lottermoser, Alfred, and Kurt Falk, chromate electrolysis with diaphragms, A., ii, 736.

Lottermoser, Alfred, and Max Steude, constitution of starch iodide, A., i, 10.

Lotz, Paul, and Joseph Christie Whitney Frazer, osmotic pressures of concentrated solutions of sucrose as determined by the water interferometer, A., ii, 264.

Lotz, Paul. See also L. van Doren.

Lowndes, Ashley Gordon, abnormal crystallisation of lead azide by protective colloids, A., ii, 216.

Lowry, Thomas Martin, catalysis with special reference to newer theories of chemical action. I. The radiation theory of chemical action. (4) Is a unimolecular action possible?

A., ii, 628.

Lowry, Thomas Martin, and Percy Corlett Austin, optical rotatory dispersion. II. Tartaric acid and the

tagtarates, A., ii, 414.

Lowry, Thomas Martin, and John Outram Cutter, the rotatory dispersive power of organic compounds. X. The

preparation and properties of pure ethyl tartrate, T., 532.

Lowry, Thomas Martin, Victor Steele, and Henry Burgess, new halogen derivatives of camphor. II. a'-Bromocamphor, T., 633.

Lowry, Thomas Martin. See also Reginald George Early, and (Miss)

Ida L. Millican.

Lowy, Alexander, and Wilmer Baldwin. derivatives of 2:4:6-trinitrobenzaldehyde. II., A., i, 134.

Lowy, Alexander, and Raymond F. Dunbrook, compounds of tellurium tetrabromide with organic bases, A., i, 446.

Lublin, Alfred, Ambard's urea constant, A., i, 400.

Lubowsky, K., emissivity of iron and copper, A., ii, 108.

Lubricht, Bernh. See Franz Feist.

Lucas, Howard J., and Archie R. Kemp, chromo-isomeric silver salts of pentabromophenol, and a theory of chromoisomerism of solid compounds, A., i,

Lucasse, Walter W. See Charles August Kraus.

Luce, Emile, and A. Doucet, the method of estimating allylthiocarbimide in mustard flour, A., ii, 537.

Luce, Emile. See also Maurice François. Luckmann, Viktoria. See Hans Fischer. Ludlam, Ernest Bowman, an attempt to separate the isotopes of chlorine, A., ii, 497.

Ludwig, Alois, the separation of zinc from other metals, especially nickel, A., ii, 786.

Ludwig, Ernst. See Hermann Pauly. Ludwig, Richard. See Ernst Weitz.

Lübke, Alfred. See Erich Schmidt.

Lück, E. A., derivatives of l-menthol. A., i, 44.

Lueck, Roger H., thermal decomposition of nitrogen pentoxide in solution, A., ii, 433.

Lücke, Th. See Gerhard Carl Schmidt. Lüdermann, Otto. See Erwin Ott.

Lüders, Hermann. See Adolf Windaus. Lüers, Heinrich, and Max Landauer, isoelectric point of the vegetable albumin leucosin, A., i, 881.

the kinetics of the coagulation of pro-

teins by heat, A., ii, 697.

Lührig, Heinrich, use of semi-microchemical and microchemical methods in place of macrochemical methods in the analysis of foods, A., ii, 534.

Lüscher, Ery, the nitrogen distribution in Bence Jones protein; a new colorimetric method for the estimation of tryptophan in protein, A., i, 1199.

Lüscher, G. See Hermann Staudinger. Lüttichau, A., the action of heterogeneous proteins in the organism, A., i, 892.

Lüttringhaus, A., and L. Rifflaender, arylaminoanthraquinone derivatives, A., i. 355.

A., i, 355.

Luff, Bernard Dunstan Wilkinson, and
Benjamin Dawson Porritt, estimation
of available sulphur in golden sulphide
of antimony, A., ii, 225.

Luff, G., the separation of zinc by means of ammonium phosphate. A., ii. 456.

of ammonium phosphate, A., ii, 456.
Luger, Alfred, the action of metallic copper and silver on diastase; the so-called oligodynamic phenomena, A., i, 65.

quinine hæmolysis, A., i, 81.

Lund, Hakon. See Einar Billmann. Lund, Yeppa. See Joseph E. Greaves.

Lundegardh, Henrik, new apparatus for estimation of carbon dioxide in air, A., ii. 719.

Lundell, Gustav Ernst Fred, and H. B. Knowles, modified method for the estimation of iron and vanadium after reduction by hydrogen sulphide, A., ii, 88.

Lundin, Harry, the proteolytic enzymes

of malt, A., i, 959.

Lundsgaard, Christen, and Eggert Möller, the estimation of the total oxygen-combining power of the blood in the van Slyke apparatus, A., ii, 724. Lundstrum, F. O. See R. O. E. Davis.

Lunelund, Harald, absorption of light

by solutions, A., ii, 8.

Lush, Ernest Joseph, preparation of formaldehyde or its polymerides from mixtures of carbon monoxide and hydrogen, A., i, 625.

Lusk, Graham [with James Evenden], animal calorimetry. XVIII. The behaviour of various intermediary metabolites on the heat production, A., i, 292.

Lusk, Graham. See also H. V. Atkinson.

Lutz, G. See H. Kesseler.

Lutz, Oscar, sensitiveness and applicability of qualitative reactions. III. Strontium ions, A., ii, 227.

Lyle, William Gordon. See William E. Caldwell.

Lyman, J. F. See D. E. Haley.

Lyman, Theodore, the spectrum of helium in the extreme ultra-violet, A., ii, 674.

Lynch, D. F. J., substituted naphthalenesulphonic acids. I. A method for identifying H-acid and its intermediates obtained from naphthalene-2:7-disulphonic acid, A., ii, 881.

Lynn, E. V., and O. Hilton, the action of nitrosyl chloride on normal heptane,

A., i, 417.

M

Maas, Otto, and E. H. Boomer, vapour densities at low pressures and over an extended temperature range. I. Properties of ethylene oxide compared to oxygen compounds of similar molecular weight, A., 1, 912.

cular weight, A., 1, 912.

Macallum, Archibald Byron, the cobalt nitrite reaction for potassium in animal and vegetable cells, A., ii, 869.

McAulay, A. L., recoil of hydrogen nuclei from swift α-particles, A., ii, 12.

Macaulay, Robert Milroy, the reaction between iodine and sulphurous acid, T., 552.

McBain, James William, and Arthur John Burnett, the effect of an electrolyte on solutions of pure soap, phaseule equilibria in the system sodium laurate-sodium chloride-water, T., 1320.

McBain, James William, and William Job Jenkins, the ultra-filtration of soap solutions; sodium oleate and

potassium laurate, T., 2325.

McBain, James William, (Miss) Millicent Taylor, and (Miss) Mary Evelyn Laing, studies of the constitution of soap solutions; solutions of sodium palmitate, and the effect of excess of palmitic acid or sodium hydroxide, T., 621.

McBain, James William. See also (Miss) Mabel Harriet Norris.

Macbeth, Alexander Killen, the labile nature of the halogen atom in organic compounds. IV. The tautomeric hydrogen hypothesis, and the removal of the halogen atom from aromatic nitro-compounds, T., 1116.

Macbeth, Alexander Killen, and John Pryde, studies of the glucosides. I. The constitution of indican, T., 1660.

Macbeth, Alexander Killen, and Robert Robinson, cevadine. I., T., 1571. Macbeth, Alexander Killen. See

See also Ian Armstrong Black, Hugh Graham, Thomas Henderson, and Edmund Langley Hirst.

McCallie, S. W., the Pitts meteorite,

A., ii, 306.

McCallum, S. T., preparation of alcoholic potassium hydroxide volumetric solution, A., ii, 54.

McCann, Wm. S., the protein requirement in tuberculosis, A., i, 497.

McCay, LeRoy Wiley, and William T. Anderson, jun., reduction of solutions of ferric salts with mercury, A., ii, 217.

reduction of vanadic acid solutions with

mercury, A., ii, 530.

McClelland, Ernest Wilson. See Samuel Smiles.

McClure, William B., adaptation of the pentabromoacetone method to the estimation of citric acid in urine, A., ii, 791.

McCluskey, K. Lucille, some new derivatives of 2-methylquinoline, A., i, 864.

McCombie, Hamilton, Harold Archibald Scarborough, and Richard Hardcastle Settle, the velocity of reaction in III. The influence mixed solvents. of temperature on the velocity of saponification of esters, T., 2308.

McCombie, Hamilton. See also Albert Eric Cashmore.

McCollum, Elmer Verner. See Victor E. Levine, and C. R. Orton.

McCrosky, C. R. See Harold D. Buell, and Samuel Wilson.

McCrudden, Francis H., pharmacological and chemical study of the roes of the barbel and pike, A., i, 194.

McDavid, James Wallace, heat developed on mixing sulphuric acid, nitric acid, and water, A., ii, 617.

MacDonald, Alexander D. See James Bryant Conant.

Macdonald, George William, obituary notice of, T., 2913.
MacDougall, D. T., the action of bases

and salts on biocolloids and cell masses, A., i, 204.

MacDougall, Frank Henry. See Paul Francis Sharp.

McEwen, Joseph L. See James Munsic Bell.

McGill, William J., use of the newer indicators in titrations of alkaloids, A., ii, 885.

McGinty, Daniel A. See Howard B. Lewis.

McGuigan, Hugh, an explanation of Liesegang's rings, A., ii, 38. Mach, Felix, and F. Sindlinger, estimation of total nitrogen in fertilisers containing nitrites and of nitrite nitrogen in the presence of nitrates, A., ii, 783.

McHargue, James Spencer, the rôle of manganese in plants, A., i, 906.

Macheleidt, volumetric estimation of potassium, A., ii, 227.
Macht, David I., pharmacological ex-

amination of isopropyl alcohol, A., i, 1093. Macht, David I., and Marguerite B.

Livingston, effect of cocaine on the growth of Lupinus albus, A., i, 798.

McHugh, Gerald Patrick. See Oscar Liste Brady.

McIlvaine, T. C., a buffer solution for colorimetric comparison, A., ii, 78.

MacInnes, Duncan A., and Eric B. electro-volumetric Townsend, an method for lead, A., ii, 456.

MacInnes, Duncan A., and Yu Liang Yeh, potentials at the junctions of univalent chloride solutions, A., ii, 252.

MacInnes, Duncan A. See also William R. Hainsworth.

McIntosh, James. See Ernest Laurence Kennaway.

Macjulevitsch, K. See E. Fritzmann. Mackall, Colin M. See Ebenezer Emmet Reid.

McKee, Ralph H., and George Barsky, ligninsulphonic acids, A., i, 1121.

McKeehan, Louis W., crystal structure of potassium, A., ii, 709.

the crystal structure of glucinum and glucinum oxide, A., ii, 766.

McKelvy, Ernest C., and Daniel H. Simpson, equilibria in the systems, carbon disulphide-methyl alcohol and carbon disulphide-ethyl alcohol, A., ii, 271.

McKenzie, Alexander, and (Miss) Isobel Agnes Smith, catalytic racemisation of optically active acid amides, T., 1348.

McKenzie, Alexander, and (Miss) Nellie Walker, optical activation of racemic acid by l-malic acid, T., 349.

Mackenzie, John Edwin, the action of sodium methoxide and its homologues on benzophenone chloride and benzylidene chloride. III., T., 1695.

McKeown, Andrew, the potential of the iodine electrode and the activity of the iodide ion at 25°, A., ii, 417.

McKeown, Andrew, influence of electrolytes on the solubility of non-electrolytes, A., ii, 552.

McLaughlin, George D. See Martin Henry Fischer.

McLean, F. C. See Joshua Harold Austin.

Maclean, (Mrs.) Ida Smedley, nature of yeast fats, A., i, 304.

the conditions influencing the formation of fat by the yeast-cell, A., i,

McLean, Stuart, thermal evolution of gases absorbed by charcoals and carbonised lignites, A., ii, 352.

McLennan, John Cunningham, and D. S. Ainslie, the structure of the line $\lambda =$ 6708 A. of the isotopes of lithium, A., ii, 541.

McLennan, John Cunningham, D. S. Ainslie, and F. M. Cale, absorption of A 5460.97 Å. by luminous mercury vapour, A., ii, 728.

McLennan, John Cunningham, and P. A. Petrie, the spectra of helium, hydrogen, and carbon in the extreme ultraviolet, A., ii, 330.

Macleod, A. Garrard. See J. Lucien Morris.

Macleod, Annie Louise, Marion C. Pfund, and Mary L. Kilpatrick, the dinitro-derivatives of p-dichlorobenzene, A., i, 1131.

McLeod, James Walter, and John Gordon, production of hydrogen peroxide by

bacteria, A., i, 1095.

McLintock, W. F. P., and F. R. Ennos, structure and composition of the Strathmore (Perthshire) meteorite, A., ii, 861.

McMullen, T. C., Friedel and Crafts' reaction; the preparation of 2-ptoluoylbenzoic acid, A., i, 140.

Friedel-Crafts' reaction with phthalic anhydride, A., i, 1025.

McRae, John Alexander. See Arthur Lapworth.

Macri, V., qualitative chemical analysis, A., ii, 779.

Madelung, Walter, questions relating

to the constitution and function of electrolytes, A., ii, 344.

Madelung, Walter, and E. Kern, dicy-anamide, A., i, 438.

Madinaveitia, Antonio, hydroxybenzyldimethylamine, A., i, 133.

abietic acid, A., i, 829. Madorsky, S. L. See William Draper Harkins.

Maeder, Horst. See Emanuel Merck, Richard Willstätter, and Otto Wolfes.

Mäder, W. See Paul Karrer.

Maestrini, Dario, velocity of reaction of vegetable enzymes. I. Influence of the concentration of the enzymes on the velocity of action of the enzymes of germinated barley, A., i, 507.

velocity of reaction of vegetable enzymes. II. Effect of hydrogen ions and of salts on the velocity of action of the enzymes of germinated barley,

A., i, 507.

velocity of reaction of vegetable enzymes. III. Effect of the quantity and volume of the substrate on the activity of the amylase of germinated

barley, A., i, 508. Magasanik, J. See Georg Wiegner.

Magnus, A., complex compounds, A., ii,

Magnus, A., and E. Schmid, a method for measuring vapour densities for the determination of atomic weights, A., ii, 260.

Mahler, E. de, a general method for the preparation of carbides of metalloids, and the existence of carbides of phosphorus and arsenic, A., i, 101. a new process for the preparation of

cadmium dimethyl, A., i, 240.

Mailhe, Alphonse, new preparation of cycloalkylamines, A., i, 332.

the catalytic decomposition of oleic acid, A., i, 423.

the catalytic decomposition of shark oil, A., i, 424.

catalytic transformation of vegetable and animal oils into petrol, A., i, 709.

catalytic decomposition of arachis oil, A., i, 712.

the catalytic decomposition of the lower acids, A., i, 803.

decomposition of aliphatic ketones, A., i, 985.

Mains, Gerald H., the system, furfural dehyde-water, A., i, 566.

Majima, Rikô, [with Chozo Chiba and Yushihiro Kudo], the chief constituent of Japanese lac. IX. Chemical investigation of the different, naturally-occurring species of lac which are closely allied to Japanese lac, A., i,

Majima, Rikô, [with Yoshihide Tahara, Gitaro Takayama, Watanabe, and Okazaki], the main constituent of Japanese lac. VIII. Position of the double bonds in the side chain of urushiol and demonstration that urushiol is not homogeneous, A., i 262.

Majima, Rikô, and Chika Kuroda, the colouring matter of Lithospermum erythrorhizon, A., i, 946.

Majima, Rikô, Kwanto Nagaoka, and Keisuke Tamada, the melting points of certain fatty-aromatic ketones, A., i, 257.

Major, R. H., chromic acid nephritis, A., i, 610.

Malfitano, G., and M. Catoire, amylocellulose considered as composed of silicic acid and amylose, A., i, 527.

Malgoyre, J., modification of the chlorometric method of Hayem and Winter, A., ii, 780.

Malkomes, Theodor. See Burckhardt Helferich.

Malméjao, F., the synovial fluid, A., i,

Malthy, John Gwilliam, optical rotations of the sugars. I. The aldohexoses and aldopentoses, T., 2608.

Malvezin, Philippe, sulphiformin (methanalsulphurous acid), A., i, 222. the chemical composition and the bouquet of wines, A., i, 1220.

the estimation of tannin in wines, A., ii, 172.

estimation of volatile acids in wine, A., ii, 880.

Malvezin, Philippe, Ch. Rivalland, and L. Grandchamp, a new preparation of formaldehyde hyposulphite and an economical generator of hyposulphurous acid, A., i, 8.

Mameli, Efisio, cubebin. IV. Derivatives of cubebinolide, A., i, 347.

syntheses in the benzofuran group; 6-methylcoumaran-2-one and 3methyl-6-isopropylcoumaran-3-one. I., A., i, 669.

mercuriation in the aromatic series. I. Phenolmercuri-acetates and -hydroxides and their derivatives, A., i,

mercuriation in the aromatic series. III. Mercuriated derivatives of 6iodothymol, A., i, 1082.

mercuriation in the aromatic series. IV. Dimercuriated derivatives of guaiacol, A., i, 1082.

Mameli, Efisio, and G. Cocconi, mercuriation in the aromatic series. V. Binary and ternary systems relating to mercuriation, A., i, 1083.

Mameli, Efisio, and Anna Mameli-Mannessier, mercuriation in the aromatic series. II. Thymolmercuriacetates and their derivatives, A., i, 1080.

Mameli-Mannessier, Anna. See Efisio Mameli.

Manchot, Wilhelm, a modification of silicon soluble in hydrofluoric acid, A., ii, 144.

Manchot, Wilhelm, and Herbert Funk, modifications of silicon; solubility of silicon in hydrofluoric acid, A., ii, 286.

modifications of silicon. II. Silicon from copper silicide, A., ii,

Manchot, Wilhelm, and Karl Ortner, hydrates of selenium dioxide, A., ii, 283.

Mancini, Mario A., modification in the Kossel-Neumann method for the estimation of phosphorus in organic sub-

stances, A., ii, 83.

Manicke, Paul. See Hermann Kunz-

Krause.

Manley, John Job, the use as a drying agent of phosphoric oxide treated with ozone, T., 331. protection of brass weights, A., ii,

Mann, Frederick George, the interaction of aniline and acraldehyde, 2178.

Mann, Frederick George, and (Sir) William Jackson Pope, production and reactions of \$\beta\beta'-dichlorodiethyl sulphide, T., 594.

the sulphilimines, a new class of organic compounds containing quadrivalent sulphur, T., 1052.

the \$\beta\$-chlorovinylarsines, T., 1754. See George L. Mann, William A. Clark.

Mannebach, O., a new apparatus for colorimetric estimations, A., ii, 158.

Mannich, Carl and W. Brose, the acetone [isopropylidene] compound of anhydroenneaheptitol; the acetone compounds of polyhydroxy-alcohols, A., i, 1118.

Mannich, Carl, and G. Heilner, the synthesis of \(\beta\)-keto-bases acetophenone, formaldehyde, and amine salts, A., i, 351.

transformations of a secondary ketobase, A., i, 371.

Mannich, Carl, and C. A. Rojahn, the colloidal nature of saccharated iron, A., i, 718.

Manske, R. H., preparation of pure ceria-earth compounds, A., ii, 646.

Mansky, (Frl.) S., the influence of sucrose on the greening of etiolated cotyledons at various stages of germination, A., i, 1222.

Mansuri, Qasim Ali, actions; the system arsenic, T., 2272. intermetallic aluminium-

Maquenne, Léon, the inversion of sucrose by alkaline copper solution, A., i, 920.

Maquenne, Léon, and Em. Demoussy. vegetation in media poor in oxygen, A., i, 707.

influence of calcium on the utilisation of the reserve material during the germination of seeds, A., i, 905.

Marcel, Sigismund. See Hugo Weil. Marcelin, A., measurement of the pressure of "surface fluids"; oleic acid, A., ii, **6**86.

Marchal, (Mlle) G., dissociation of glucinum sulphate, A., ii, 620.

Marchal, (Mlle) G. See also Camille

Matignon.

Marchand, Robert, preparation of terpineol, A., i, 262.

Marckwald, Willy, and K. Helmholtz, phosphorus, A., ii, 845.

Marckwald, Willy, and F. Struwe, guanidonium salts, A., i, 328.

Marcusson, Julius, structure and formation of the humic acids and coal, A., i,

Marcusson, Julius, and H. Smelkus, the colouring constituents of montan wax, A., i, 807.

Marden, John W., and M. N. Rich, zirconium, A., ii, 153.

Margosches, Benjamin Max, and R. Baru, chlorohydrocarbons and carbon chlorides. II. The knowledge of the saturation character of the di-, tri-, tetra-chloroethylenes, and Α., 235.

Margosches, Benjamin Max, and Erwin Vogel, kjeldahlisation of mononitrophenols, mononitrobenzoic acids, and mononitrocinnamic acids, A., ii, 522.

Marinesco, G., the oxidising enzymes in the phenomena of life in its normal and pathological states, A., i, 790. the evolution of oxidative enzymes, A., i, 1211.

Marinot, André, estimation of water in fuels, A., ii, 223.

estimation of sulphur in cast irons and

steels, A., ii, 224.

Mario, Tealdi, red coloration of sodium hypochlorite solutions, A., ii, 457.

Mark, Hermann. See Wilhelm Schlenk. Markley, A. L. See F. H. Rhodes. Marsh, C. Dwight, A. B. Clawson, James F. Couch, and Hadleigh Marsh, western sneezeweed (Helenium hoopesii) as a

poisonous plant, A., i, 413. Marsh, Hadleigh. See C. Dwight Marsh. Marsh, J. K., and Alfred Walter Stewart, a magnetic model of atomic constitution, A., ii, 277.

Marshall, Eli Kennerly, jun., effect of loss of carbon dioxide on the hydrogenion concentration of urine, A., i, 494.

Marshall, Eli Kennerly, jun. See also Benjamin S. Neuhausen.

Martin, Felix, salts of codeine; the hydrobromide; preparation of solutions for injection; A., i, 948.

Martin, Frances T. See Robert B. Gibson.

Martin, J. H. See G. Davis Buckner. Martin, W. H., and S. Lehrman, scattering of light by dust-free liquids. II., A., ii, 335.

Martinet, Jh., colouring matters of the isatin-yellow series, A., i, 278.

Martinet, Jh., and F. Vacher, a naphthalenic di-isatin, A., i, 688.

Martinez, J. Palacios, and Heike Kamerlingh Onnes, the vapour pressure of hydrogen and new thermometric determinations in the domain of liquid hydrogen, A., ii, 472.

Martinez, J. Palacios. See also Heike Kamerlingh Onnes.

Marvel, Carl S., and V. L. Gould, the preparation of mercury dialkyl compounds from the Grignard reagent,

A., i, 329.
Marx, Theodor. See Karl Schaum.

Masai, Y. See Yashiro Kotake.

Masing, G., the theory of resistance limits in mixed crystals, A., ii, 37.

Mason, Walter, and Richard Vernon

Wheeler, the ignition of gases. Ignition by a heated surface; mixtures of methane and air, T., 2079.

Massera, V., essential oil of juniper from Cyrenaica, A., i, 945.

Massink, A., the minimum solubility of aluminium hydroxide in water, A., ii, 299.

phenol-red as an indicator for acidity of media, A., ii, 307.

James Irvine Orme. See Masson, Lionel Felix Gilbert.

Masters, (Miss) Helen, reactions of cellulose with sodium chloride and other neutral salt solutions. I. Preliminary survey, T., 2026.

Bunkichi. See Shigeru Masumoto. Komatsu.

Mathews, Joseph Howard. See Frederick

L. Browne, and Alvin Strickler.

Mathewson, W. E., the use of sodium a-naphthol-2-sulphonate for the spectrophotometric estimation of aromatic amino-compounds, A., ii, 882.

Mathias, Emile, Claude Auguste Crommelin, and Heike Kamerlingh Onnes, rectilinear diameter of hydrogen, A., ii, 440, 561.

Mathias, Emile, Claude Auguste Crommelin, and Heike Kamerlingh Onnes, heat of vaporisation and the difference, m'-m, of the specific heats at the state of saturation for argon, oxygen, nitrogen, and hydrogen, A., ii, 472.

the rectilinear diameter of nitrogen, A., ii, 562.

the rectilinear diameter of argon, A., ii, 565

Mathias, Emile, and Heike Kamerlingh Onnes, the rectilinear diameter of

oxygen, A., ii, 561.

Matignon, Camille, economic realisation of oxidation reactions in factories where nitric acid is synthesised; applications, A., ii, 563.

Matignon, Camille, and M. Fréjacques, the synthetic preparation of carbamide from ammonia, A., i, 723.

the transformation of ammonia into carbamide, A., ii, 272.

conditions of formation and stability of ammonium carbamate, A., ii,

445. transformation of ammonium the carbamate, A., ii, 499.

the transformation of gypsum into

ammonium sulphate, A., ii, 570. Matignon, Camille, and (Mile) Marchal, the transformation of sodium formate into oxalate, A., i, 915.

Matsumo, Gengo. See Leon Asher.

Matsuno, Kichimatsu. See William Edward Garner.

Matsucka, Z. See Yashiro Kotake. Matsuvama, Toshitanc. See Kozo Sakaguchi.

Matsuyama, Yoshihiko. See Umetarô Suzuki.

Mattaar, Th. J. F., the replacement of halogen in 4-chloro-3-nitrobenzonitrile and in 4-bromo-3-nitrobenzonitrile. I and II., A., i, 251; ii, 275.

Matthies, Max. See Fritz Paneth.

Emil, relationship SanteMattson, between precipitation, adsorption, and charge on the particles with particular reference to the hydroxyl ions, A., i, 800.

Maurer, H. See William Küster. Mauriac, P., and L. Servantie, influence of the dextrose concentration and of the alkalinity on glycolysis in vitro, A., i, 1211.

Mauthner, Ferdinand, the synthesis of aromatic ketones by means of mixed zinc organic compounds, A., i, 457. new synthesis of isofernia acid [3hydroxy-4-methoxycinnamic acid], A., i, 936.

CXXII. ii.

Maxted, Edward Bradford, catalysis of hydrogen peroxide by finely divided platinum; the influence of inhibitants, T., 1760.

Maxwell, T. B., some derivatives of fenchone, A., i, 753.

May, Clarence E., 8-naphthol, A., i, 449. May, Clarence E,, and Harry P. Ross, nesslerisation of ammonia solutions, A., ii, 312.

Mayeda, Kenjirô. See Yoshiharu Mura-

Mayeda, Minoru, mannanase and levidulinase, A., i, 694.

Mayen, Hans. See Emanuel Merck. Mayer, A. See Alexander Gutbier.

Mayer, (Mlle) Anka. See Maximilian Samec.

Mayer, Fritz, and Erika Alken, 2:6-dimethylnaphthalene, A., i, 999.

Mayer, Fritz, and Walter Freund [with Kaspar Pfaff, and Hermann Wernecke], the reaction of o-halogenated ketones with feebly basic amines and synthesis of derivatives of ms-phenylacridine, A., i, 865.

Mayer, Fritz, and Rudolf Heil, the pyrazoleanthroneconstitution of

yellow, A., i, 877.

Mayer, Fritz, and Wilhelm Krieger, the diphenyleneoxide series, A., i, 746.

Mayer, Fritz, and Heinrich Schönfelder, the acenaphthene series. II., A., i, 1166.

Mayer, Fritz, and Therese Schulte, hydrogenation of 1:6-dimethylnaphthalene, A., i, 819.

Mayer, Fritz, and Adolf Sieglitz, investigations and ring closures in the methylnaphthalene series, A., i, 999.

Mayer, Fritz, and Adolf Sieglitz [with E. Fischer, J. Hagen, R. Jung, IV. Knies, C. Kohl, F. Listmann, W. Neugebauer, and Therese Schulte], investigations and ring closures in the series of the methylnaphthalenes, A., i, 740.

Mayer, Paul, influence of mineral spring water on the carbohydrate interchange in yeast, A., i, 972.

Mayes, Charles. See Dorothy Jordan Lloyd.

Mazza, L. See Luigi Rolla.

Mazzocco, P., calcium in the blood of various species of animals, A., i, 788,

Mazzocco, P., and R. Bustos Moron, calcium content of blood serum in pregnancy and child-birth, A., i, 892.

Mazzucchelli, Arriyo, and S. Anselmi, density of aqueous solutions of ammonium perchlorate, A., ii, 376.

Mazzucchelli, Arrigo, and R. Armenante, hydrate of ethylene oxide, A., i, 620. Mead, W. J. See Lowell H. Milligan.

Meakins, Jonathan, and Charles Robert Harington, relation of histamine to intestinal intoxication. I. Presence of histamine in the human intestine, A., i, 396.

Means, James H. See Joseph C. Aub. Mears, Braincrd, and Robert E. Hussey, use of perchloric acid as an aid to digestion in the Kjeldahl nitrogen estimation, A., ii, 159.

Mecke, R., series regularities in the resonance spectrum of iodine, A., ii, 177.

Meerwein, Hans, and Konrad Emster [with Jacob Joussen], equilibrium isomerism between bornyl chloride, isobornyl chloride and camphene hydrochloride, A., ii, 751.

Meerwein, Hans, and Jacob Joussen, the preparation of bornylene, A., i, 1042.

Mees, R. T. A., the detergent power of soap solutions, A., ii, 268.

Meggers, W. F. See Paul D. Foote. Mehner, Heinz. See Paul Holzer.

Meier, Klothilde, and W. Krönig, bloodgas analysis. IX. Narcosis and charge on the colloids, A., i, 191.

Meier, Klothilde. See also Rosenthal.

Meier, Wolfgang. See Otto Fischer.

Meigen, W., and A. Neuberger, separation of solid and liquid fatty acids, A., ii, 880.

Meisenheimer, Jakob, the Beckmann transformation, A., i, 152.

the nitrogenous constituents of yeast. II. The purine bases and the diaminoacids; results, A., i, 304.

optically active amine oxides. III., A., i, 813.

Meisenheimer, Jakob, and Hermann Bernhard, optically active amine amine oxides. III. (i). Methylethylpropylamine oxide, A., i, 813.

Meisenheimer, Jakob, Hellmuth Greeske, and Amalie Willmersdorf, behaviour of allyl- and benzyl-amino-oxides towards sodium hydroxide solution, A., i, 334.

Meisenheimer, Jakob, and Artur Lohsner, optically active amine oxides. III. (ii). Methylethylallylamine oxide, A., i, 813.

optically active amine oxides. Benzylmethylethylamine oxide, A., i, 822.

Meisenheimer, Jakob, and Karl Weibezahn, triarylisooxazoles, A., i, 176. **Meissner**, R, accleration of blood-clotting by euphylline, A., i, 193.

Meitner, Lise, radioactivity and atomic

constitution, A., ii, 15.
the production of \$\beta\$-ray spectra by
radioactive substances, A., ii, 416. the relationship between β - and γ rays, A., ii, 416.

the Neuburger nuclear model, A., ii, 702.

B-ray spectra and their connexion with γ-radiation, A., ii, 732.

wave-lengths of γ -rays, A., ii, 733. Meitner, Lise. See also Otto Hahn.

Melamed, Dona. See Rudolf Pummerer. Melander, Karl H. A., lignin. I. and

II., A., i, 325. estimation of methyl alcohol, A., ii, 320.

Melbye, G. Svensen, the solubility of copper hydroxide in sodium hydroxide solutions, A., ii, 851.

Meldrum, William Buell. See Theodore William Richards.

Mellon, M. G., estimation of lead in lead amalgam, A., ii. 870.

Mellon, M. G., and H. F. Reinhard, estimation of lead in lead amalgam, A., ii, 787.

simultaneous electro-deposition of lead and lead dioxide, A., ii, 817.

Mellon, M. G., and J. C. Siegesmund, chlorination of mixed silver haloids in Gooch crucibles, A., ii, 781.

Mellon, R. R., Solomon Farley Acree, Pauline M. Avery, and Edgar A. Slagle, the ionisation constants of glycerophosphoric acid and their use as buffers, especially in culture media, A., i, 405.

Mellon, R. R. See also Solomon Farley Acree.

Melvill, F. L., effect of iron on the iodine titration of arsenite, A., ii, 784.

Menager, (Mile) Y. See Bertrand, and P. Freundler. See Gabriel

Menaul, Paul, the hypobromite reaction on urea, A., ii, 403.

Mende, H., the analysis of aluminium alloys, A., ii, 162.

Mendelewitsch, Anissim. See Moritz Kohn.

Meneghetti, E., pharmacological action of colloidal arsenious sulphide, A., i, 301.

Menzel. See Erich Müller.

Heinrich, dissociation and Menzel, hydrolysis equilibria in solutions of salts of carbonic and boric acids, A., ii, 345.

Menzel, W. See Julius Tröger.

Menzies, Robert Charles, \(\gamma\)-methylfructoside, T., 2238.

Menzies, Robert Charles, the purification of methyl alcohol by means of sodium

hypochlorite, T., 2787.

Merck, Emanuel, explosion of hydrargyrum oxycyanatum, A., i, 640. preparation of hydrogenated 1-alkylpyridine-4-carboxylates, A., i, 949. preparation of 1-alkylpyridine carboxylates, A., i, 950.

preparation of betaines of the pyridine

series, A., i. 950.

Merck, Emanuel, Claus Diehl, and Hans Mayer, preparation of acetylsalicylyl compounds of quinine and its derivatives, A., i, 46.

Merck, Emanuel, and Otto Wolfes, pre-

paration of tropinonecarboxylic acid

esters, A., i, 567.

Emanuel, Otto Wolfes, and Merck. Erich Kornick, preparation of carboxylic acids of the purine series, A., i, 1071.

Otto Wolfes, and Merck, Emanuel, Horst Maeder, preparation of tropinonecarboxylic acid esters, A., i, 568.

preparation of nortropinone and its derivatives, A., i, 1172.

preparation of tropinecarboxylic acid, A., i, 1173.

preparation of tropinonedicarboxylic esters, A., i, 1173.

Merkel, E. See E. Grüneisen.

Merl, \dot{T} ., and J. Daimer, a study of the catalase of flour, A., i, 184.

Merrill, Alice R. Thompson, cystine, A., i, 326.

Merrill, David R., and Charles C. Scalione, catalytic oxidation of carbon monoxide at ordinary temperatures, A., ii, 136.

Merrill, George Perkins, meteoric iron from Odessa, Ector Co., Texas,

A., ii, 451.

meteoric irons from Alpine, Texas, Mountain, Signal Lower California, A., ii, 452.

Merrill, Henry Baldwin, separation of molybdenum and tungsten by means of selenium oxychloride, A., ii, 229.

separation of columbium and tantalum by means of selenium oxychloride,

A., ii, 230.

Merrill, Paul W., F. L. Hopper, and Clyde R. Keith, identification of air lines in spark spectra from λ 5927 to λ 8683, A., ii, 802. Merton, Thomas Ralph, the structure of

the red lithium line, A., ii, 803.

Merton, Thomas Ralph, and S. Barratt, spectrum of hydrogen, A., ii, 461.

Merton, Thomas Ralph, and D. N. Harrison, errors arising unsymmetrical measurement of spectrum lines, A., ii, 673.

Merton, Thomas Ralph. See also

Harold Brewer Hartley.

Merwin, Herbert Eugene. See Eugen Posnjak. and Henry Stephens Washington.

Messmer, Ernst. See Kurt Hess.

Messner, J., benzyl compounds [benzyl

alcohol], A., i, 138.

Mestrezat, W., and (Mile) Marthe Paul Janet, estimation of ammonia in urine by Schlesing's bell-glass method, A., ii, 453.

Metzl, Heinrich. See Walter Fuchs.

Meulen, Henri ter, a new method of estimating sulphur in organic compounds, A., ii, 311.

the estimation of oxygen in organic compounds, A., ii, 717.

Meulengracht, E., estimation of hæmoglobin, A., ii, 798.

Meurice, R., a rapid method for the estimation of ammoniacal nitrogen, A., ii, 225.

estimation of calcium in natural

phosphates, A., ii, 658.

Mewes, Rudolf, approximate rule for the specific heats of gases and vapours, A., ii, 737.

Meyer, Charles F. See Walter F. Colby.

Meyer, Friedrich, Gustav Bailleul, and Gerhard Henkel, the existence of sulphur tetroxide, A., ii, 843.

Meyer, G., and Greulich, spectroscopy of uranium and some rare earths,

A., ii, 6.

Meyer, G., and Adolf Heck, molecular refraction of some molten salts and their degree of dissociation, A., ii, 241, 329.

Meyer, Gustave Morris. See Phabus A. Levene.

Meyer, Heinrich. See WaltherDilthey.

Meyer, Julius, preparation of selenium dioxide, A., ii, 639.

Meyer, Julius [with Leonhard Speich, and Hanns Moldenhauer], complex selenates, A., ii, 70.

Meyer, Julius, and Walter Friedrich. barium sulphuric acid and barium selenic acid, A., ii, 644.

Meyer, Julius, and Hanns Moldenhauer. the preparation of telluric acid, A., ii,

Meyer, Julius, and Valentin Stateczny, some poly-acids of the elements of the sulphur group, A., ii, 773.

Meyer, Julius, and Walter Wagner, organic derivatives of selenic acid, A., i, 620.

nitrosylselenic acid, A., ii, 372.

Meyer, Jules. See Leopold Ruzicka. Meyer, Kurt Heinrich, and Hans Gottlieb-Billroth, action of nitric acid on phenol ethers, A., i, 539.

Meyer, Kurt Heinrich, and Ludwig Orthner, synthesis of formamide from carbon monoxide and ammonia, A., i, **529.**

Meyer, Kurt Heinrich, \mathbf{and} Kurt Schuster, diphenylstyrylcarbinol and triphenylallene, A., i, 540.

transformation of tertiary ethinyl-carbinols into unsaturated ketones, A., i, 556.

Meyer, Martin, [lecture experiment], time reaction, A., ii, 636. Meyer, Martin. See also Marston Taylor

Bogert.

Meyer, P. See Hermann Staudinger.

Meyer, Robert, thermal expansion of concentrated salt solutions, A., ii, 737.

Meyer, Robert. See also Walther Borsche.

Meyer, R. Ernest. See Paul Ruggli. Meyer, Stefan, and Karl Przibram, coloration and luminescence produced by the action of Becquerel rays, A., ii, 339.

Meyer, Walther. See Arthur Hantzsch. Meyer-Bisch, Robert, and E. Basch, the fate of parenteral administered sulphur and its influence on metabolism, A., i,

See also Wolf-Meyer-Bisch, Robert. gang Heubner.

Meyerhof, Otto,

erhof, Otto, energy exchanges in muscle. IV. Formation of lactic acid in out muscle, A., i, 86. energy exchanges in muscle, A., i,

897. heat of combustion of lactic acid, A.,

ii, 475. Meysenbug, L. von. See Willey Denis. Mezger, F., estimation of urea, A., ii,

Micewicz, St. See Friedrich Kehrmann.

Michaelis, Leonor, the determination of alkalinity in culture media, A., i, 405. Michaelis, Leonor, and Yrjö Airila, the

electric charge of hæmoglobin, A., i,

Michaelis, Leonor, and N. Hirabayashi, ionic synergism. II. Investigation of mastic sols, A., ii, 429.

Michaelis, Leonor, and R. Krüger, further elaboration of the indicator method without buffers, A., ii, 157.

Michajlova, Olga. See Nikolai Schilov. Michel, Eduard. See Fritz Ephraim.

Michel, J. See Georg Bredig.

Michels, A., the system isobutyl alcoholwater, A., ii, 486.

Middleton, Edmund Burrus. See Frank C. Whitmore.

Mickeley, Arthur. See Max Bergmann. Mikeska, Louis A. See Phæbus A. Levene.

Mildbrand, Hans. See Hermann Leuchs. Milde, E. See Fritz Arndt.

Milbauer, Jaroslav, sodium peroxide, A., ii, 520.

iller, E. J. See Floyd E. Bartell, and Charles S. Robinson. Miller, E. J.

Miller, Elizabeth W., effect of certain stimulating substances on the invertase activity of yeast, A., i, 202.

Miller, G. von. See Richard Willstätter.

Miller, George E. See Ebenezer Emmet Reid.

Miller, Harry G., nitrogen compounds in lucerne hay, A., i, 414.

Miller, J. E. See De Witt Neighbors. Miller, M. See Edgar Wedekind.

Millican, (Miss) Ida L., Alfred Francis Joseph, and Thomas Martin Lowry, the properties of ammonium nitrate. II. Ammonium nitrate and water, T., 959.

Milligan, C. H., and Ebenezer Emmet Reid, the ethylation of benzene and naphthalene, A., i, 330.

the transfer of hydrogen from an alcohol to an aldehyde, A., i, 337.

Milligan, Lowell H., solubility of aluminium nitrate crystals in solutions of nitric acid of various strengths at various temperatures, A., ii, 380.

Milligan, Lowell H. [with W. J. Mead], mechanism of the dehydration of crystalline aluminium hydroxide and of the adsorption of water by the resulting alumina, A., ii, 447.

Millikan, Robert Andrews, extension of the ultra-violet spectrum and the progression with atomic number of the spectra of light elements, A., ii, 100.

Mills, William Hobson, the cyanine dyes. IV. Cyanine dyes of the benzothiazole series, T., 455.

William Hobson, and Walter Mills, Theodore Karl Braunholtz, the cyan-ine dyes. V. The virtual tautomerism of the thiocyanines, T., 1489.

ills, William Hobson, and (Miss) Frances Mary Hamer, the quaternary salts of quinaldinic acid, T., 2008.

Mills, William Hobson, and (Sir) William Jackson Pope, 2-p-dimethylaminostyrylpyridine methiodide, a new photographic sensitiser, T., 946.

Mills, William Hobson, and James Leonard Brierley Smith, the reactivity of methyl groups in heterocyclic bases, T., 2724.

Mills, William Hobson.See also Walter Karl Theodore Braunholtz.

Minaeff, W. J., and Kurt Ripper, anthracoumarin derivatives. I., A., i. 162.

Mingazzini, M. See Leopold Ruzicka. Minkowski, R., influence of the pressure of foreign gases on the D-lines in saturated sodium vapour, A., ii, 242. Minkowski, R. See also Rudolf Ladenburg.

Minnis, Wesley. See Moses Gomberg. Minovici, Stefan, and Al. Ionescu, new

method for the volumetric estimation of copper, A., ii, 162.

Minovici, Stefan, and Constantin Kollo, new method for the estimation of manganese, A., ii, 787.

Minton, Thomas Hooker, and Henry Stephen, preparation of o-, m-, and pnitrophenoxyacetic acids and various nitrotolyloxyacetic acids and their derivatives, T., 1591.

studies in the coumaranone series. II. The preparation of 4- and 6chlorocoumaran-2-ones and conversion into 2- and 4-chloroflavonols respectively, and some derivatives of o- and p-chlorophenoxyacetic acids, T., 1598.

Miolati, A., complex salt of mercuric acetate and sulphide, A., i, 982.

Mirande, Marcel, the influence of light on the formation of anthocyanin in the scales of lily bulbs (Lilium candidum and L. martagon), A., i, 1100.

the relation between anthocyanin and oxydases, A., i, 1224.

the relation between tissue-acidity and the presence of anthocyanin in the scales of lily bulbs exposed to light, A., i, 1224.

Miravalles, R. See Enrique Moles. Mislowitzer, E., estimation of oxalic acid in urine, A., ii, 325.

Missenden, John, identification of cæsium and rubidium, A., ii, 658.

Misson, Georges, detection and estimation of vanadium in steels, A., ii, 459.

estimation of phosphorus in minerals and in coke ash by a colorimetric method, A., ii, 718.

Mitchell, Alec Duncan, studies on hypo-IV. Its reaction phosphorous acid.

with cupric chloride, T., 1624.

Mitchell, H. H., W. B. Nevens, and
F. E. Kendall, the relation between the endogenous katabolism and the non-protein constituents of the tissues, A., i, 897.

Mitchell, Philip H., J. Walter Wilson, and Ralph E. Stanton, the selective absorption of potassium by animal cells. II. The cause of potassium selection as indicated by the absorption of rubidium and cæsium, A., i, 196.

Mitscherlich, Alexander, ignition point of detonating gas [hydrogen and oxygen, A., ii, 358.

Mitsukuri, Shinroku. See Frederick G. Keyes.

Mittra, N. N., and Nilratan Dhar, some induced reactions and their analogues in the animal body, A., i, 1210.

Mittra, N. N. See also Nilratan Dhar. Mituhori, Saburo. See Yasuhiko Asa-

Miura, Masataro. See Sylvester Solomon

Zilva. Miyadera, K., effect of radiothorium on

metabolism, A., i, 966. Miyake, Koji, and S. Soma, nitrification, A., i, 1096.

Miyamoto, Susumu, chemical reactions induced by the silent discharge. Ethylene and nitrogen. II. Benzene and carbon dioxide, A., i, 418.

reducing action of ferrous hydroxide, A, ii, 647.

Miyashita, Chaji. See Akira Ogata. Möhl. See Otto Diels.

Moehlmann, E. O. See Francis P.

Venable. Möller, Eggert. See Christen Lundsgaard.

Möller, Hans Peter, rhythmic precipitation phenomena in cell membranes

of plants, A., i, 94.

Moeller, W., the connexion between hydrolysis and adsorption, A., ii, 689.

Moerk, Frank X., the volumetric determination of phosphoric acid and of sodium phosphate and pyrophos-

phates, A., ii, 866.

Moerk, Frank X., and Edward J. Hughes, methyl-red in the assay of phosphoric acid and sodium phosphate, A., ii, 866.

Mörner, Carl Th., homogentisic acid. II. The behaviour of homogentisic acid when boiled with ferric chloride, A., i, 341.

Mörner, Carl Th., homogentisic acid. III., A., i, 341.

magnesium compound of 8-hydroxy-

quinoline, A., ii, 659. Moesveld, A. L. Th. See Ernst Cohen.

Moggi, Aldo. See Antonio Pieroni. Mohler, Fred L. See Paul D. Foote.

Mohr, Ernst, theory of the cis-transisomerism of decahydronaphthalene, A., i, 243.

two cycloheptane models free from

strain, A., i, 441.

the accuracy of Dumas's method for the estimation of nitrogen in the cases of substances rich in nitrogen, A., ii, 82.

Moir, James, the calculation of the colour of the azo-dyes and related coloured substances, T., 1555.

the mathematics of the dicyclic colour theory, and a new theory of the structure of the nitrogen atom, T., 1808.

sensitive test for phenols, A., ii, 321.

colour and chemical constitution. XIII. Calculation of the colour of monocyclic dyes, A., ii, 333.

Mokragantz, M. See Gabriel Bertrand. Moldaenke, K. See Julius von Braun. Moldenhauer, Hanns. See Julius Meyer. Moles, Enrique, the atomic weight of carbon, A., ii, 51.

numerical revision of the data referring to the density of gaseous hydrogen bromide; atomic weight of bromine, A., ii, 140.

critical study of the modern value of the density of gaseous oxygen, A., ii, 141.

normal density of [chemically pure] nitrogen, A., ii, 562.

Moles, Enrique, and M. Crespi, thermal decomposition of potassium permanganate, A., ii, 374.

new revision of the density of oxygen

gas, A., ii, 636.

Moles, Enrique, and F. González, revision of the density of oxygen gas, A., ii, 497.

Moles, Enrique, and R. Miravalles, compressibility of exhausted flasks in the determinations of the densities of gases, A., ii, 617.

Moles, Enrique. See M. Payá. Molisch, Hans, effect of transpiration on the disappearance of starch from leaves, A., i, 309.

the alleged development of hydrogen peroxide in carbon dioxide assimilation, A., i, 411.

Molliard, Marin, a new acid fermenta-tion produced by Aspergillus niger, A, i, 611.

Mollow, W., spleen and digestion, A.,

i, 397.

Moloney, P. J., a quick-acting hydrogen electrode, A., ii, 253.

Momferratos-Floros, Kate. See Ludwig Pincussen.

Monasch, E., the titration of zinc, A., ii, 160.

Robert Ludwig, and Albert Mond, Edward Wallis, researches on the metallic carbonyls, T., 29.

the action of nitric oxide on the metallic carbonyls, T., 32.

Mondain-Monval, Paul, preparation of ammonium chloride, A., ii, 444. the preparation of ammonium chloride at low temperatures, A., ii, 642.

Monnier, R. See Friedrich Kehrmann. Monro, Alexander Donald, the isotope ratio of New Zealand boron, T., 986.

Montagne, (Mlle). See Edmond Emile Blaise.

Montané, J. See Émile F. Terroine. Montemartini, C., chemical reactions induced by the corona effect in circuits traversed by continuous currents, A., ii, 734.

Montes, Zoila. See Augustus P. West. Montmollin, Hugues de. See Franz Fichter.

Moore, B. E., excitation stages in open arc-light spectra. I. Sodium, potassium, calcium, strontium, barium, and magnesium. II. Silver, bismuth, cadmium, zinc, air, and copper, A., ii,

Moore, Forris Jewitt, and R. Thomas, the constitution of the secondary product in the sulphonation of ciunamic acid, A., i, 454.

Moore, R. B. See R. G. Nyswander. Moquet, L. See Henri Bierry.

Moraczewski, Waclaw, and Egon Lindner, influence of intravenous sugar injections on the excretion of lactic acid, on the blood-sugar, and on the white blood-corpuscles, A., i, 402.

Moran, R. C., dinitrodiphenylamine, A., i, 648.

Moran, Thomas, and William Cudmore McCullagh Lewis, studies in catalysis. XVI. The inversion of sucrose by

hydrogen ion, T., 1613.

Morawitz, P., and G. Denecke, swelling processes in subcutaneous tissues, A.,

i. 492

Moreau, Ed., and A. Bonis, colorimeter, A., ii, 862.

Morelli, R. See G. Canneri.

Morey, George W., and Norman L. Bowen, the melting of potash felspar, A., ii, 577.

Morgan, Gilbert Thomas, and Sydney Chazan, 6-amino-2-p-tolyl-αβ-naph-thatriazole, A., i, 181.

Morgan, Gilbert Thomas, and Evelyn Ashley Cooper, bactericidal action of the quinones and allied compounds, A., i, 204.

Morgan, Gilbert Thomas, and Harry Dugald Keith Drew [with Evelyn Ashley Cooper], researches on residual affinity and co-ordination. VIII. Interaction of tellurium tetrachloride and \$\beta\$-diketones, T., 922.

Morgan, Gilbert Thomas, Harry Dugald Keith Drew, and Thomas Vipond Barker, researches on residual affinity and co-ordination. XI. Interaction of selenium tetrachloride and \(\beta\)-diketones, T., 2432. Morgan, Gilbert Thomas, and Hugh

Morgan, Gilbert Thomas, and Hugh Gilmour, aminonaphthatriazoles as colour intermediates, A., i, 380.

Morgan, Gilbert Thomas, and Herbert Joseph Seymour King, researches on residual affinity and co-ordination. IX. Cobaltammine salts of the nitrodyes, T., 1723.

Morgan, Gilbert Thomas, and Wilfrid Ledbury, researches on residual affinity and co-ordination. XIV. Interactions of metallic salts and dimethyldithiolethylene, T., 2882.

Morgan, Gilbert Thomas, and John Ewart Moss, researches on residual affinity and co-ordination. XII. Cobaltammine and ferric lakes of dinitrosoresorcinol, T., 2857.

Morgan, Gilbert Thomas, and Hugh Norman Read, the diazo-reaction in the carbazole series; carbazole-3diazonime and -3-diazonium salts, T., 2709.

Morgan, Gilbert Thomas, and Harry Gordon Reeves, azomethine derivatives of the 2- and 4-hydroxy-α-naphthaldehydes, T., 1.

Morgan, Gilbert Thomas, and Horace Samuel Rooke, β-naphthylmethylamine-6-sulphonic acid, A., i, 134.

Morgan, Gilbert Thomas, and John David Main Smith, researches on residual affinity and co-ordination. VII. Cobaltic lakes of the alizarin series, T., 160.

researches on residual affinity and co-ordination. X. Salicylatotetramminocobaltic salts and the constitution of oxonium compounds, T., 1956.

Morgan, Gilbert Thomas, and John David Main Smith, researches on residual affinity and co-ordination. XIII. Cobaltammine and chromic lakes of the azosalicylic acids, T., 2866.

the azosalicylic acids, T., 2866.

Morgan, E. J., C. P. Stewart, and Frederick Gowland Hopkins, the anaerobic and aerobic oxidation of xanthine and hypoxanthine by tissues and by milk, A., i, 1078.

Morgen, A., G. Schöler, K. Windheuser, and Elsa Ohlmer, replacement of protein by urea in rations, A., i, 293.

Mori, Yoshitane, the behaviour of phenyl-lactic acid in the animal organism. II., A., i, 1216.

comparative researches on the production of acetoacetic acid from d- and l-phenyl-lactic acid and from d- and l-hydroxyphenyl-lactic acid in the surviving liver, A., i, 1217.

the surviving liver, A., i, 1217.

Mori, Yoshitane, and T. Kanai, the
asymmetrical reduction of ketonic
acids to the corresponding alcohols in
organs, A., i, 1217.

Mori, Yoshitane. See also Yashiro Kotake.

Morimoto, Yoshio, urea content of cow's milk; estimation of urea, A., i, 703.

Moritz, J. See Martin Battegay.

Moron, R. Bustos. See P. Mazzocco. Morrell, Jacques C. See Harold A. Fales.

Morrell, Robert Selby, the transformation of methyl α-elæostearate into methyl β-elæostearate, A., i, 982.

Morris, J. Lucien, and A. Garrard Macleod, the uric acid of human blood, A., i, 392.

colorimetric estimation of uric acid; estimation of 0.03 to 0.5 mg. quantities by a new method, A., ii, 328.

Morris, Samuel. See C. W. Foulk.

Mortimer, F. Spencer, vapour pressures and heats of vaporisation of nonassociated liquids, A., ii, 615.

melting point, latent heat of fusion, and solubility, A., ii, 621.

Moser, E. See Hugo Weil.

Moser, Eduard, attainment of constant high temperatures, A., ii, 115.

Moser, Ludwig, the absorption meter, an apparatus for gas analysis, A., ii, 519.

Moser, Ludwig, and A. Brukl, gravimetric estimation of hydrogen phosphide and a new apparatus for gas analysis, A., ii, 393.

Moser, Ludwig, and E. Doctor, the preparation of hydrogen selenide from

metallic selenides, A., ii, 46.

Moser, Ludwig and Josef Ehrlich, the separation of arsenic from tungsten, vanadium, and molybdenum by means of methyl alcohol in a current of air, A., ii, 314.

the theory of the distillation of arsenic and a new separation of arsenic from all metals in a current of air, A., ii,

315.

Moser, Ludwig, and K. Ertl, the preparation of hydrogen telluride from metal tellurides, A., ii, 48.

Moser, Ludwig, and P. Kohn, the estimation of sulphuric acid as barium sulphate in the presence of aluminium, A., ii, 782.

Moser, Marie. See Siegfried Skraup. Mosimann, Paul. See Fritz Ephraim.

Moss, John Ewart. See Gilbert Thomas Morgan.

Moudgill, Kishori Lal, 2:8-tetramethyldiaminoacridine, T., 1506. brominated isocyanines, T., 1509.

bromo-2-methylquinolines, A., i, 173.

Moudgill, Kishori Lal., and K. R. Krishna Iyer, the essential oil from Inchi grass (Cymbopogon Stapf.), A., i, 945.

Moudgill, Kishori Lal, and P. N. Vridhachalam, essential oil of Lantana

camara, A., i, 754.

Mougne, G., the preparation of pure galactose, A., i 630.

Moureu, Charles, and Gérald Barrett, the condensation products of ethyl **B**-chloropropionate anda-chloropropionate with magnesium ethyl bromide and some compounds which are derived from them, A., i, 4.

Moureu, Charles and Ralph L. Brown, the o- and p-nitrobenzyl bromides, A., i, 23. Moureu, Charles, and Charles Dufraisse,

auto-oxidation; the anti-oxygens, A., i, 250.

auto-oxidation; anti-oxygens, various phenomena related thereto. II., A., i, 824.

Moureu, Charles, and Patrick Hugh Gallagher, derivatives of cinnamyl alcohol and phenylallyl alcohol; α-phenylglycerol, A., i, 34.

Moureu, Charles, and Adolphe Lepape, estimation of krypton and xenon in absolute values by spectrophotometry,

A., ii, 394.

Moyle, Dorothy Mary. See Dorothy Lilian Foster.

Muchlinski, A. See Friedrich August Henglein.

Muck, Johann, unsaturated alcohols obtained from the fat of ovarialdermoid cysts, A., i, 1092.

Mück, Franz Johann, the volumetric estimation of antimony and tin in red brass, A., ii, 722.

Mügge, Otto, structure and simple displacement of iron, A., ii, 381.

Müller, A., is the undecomposed hydrogen peroxide or the oxygen split from it the carrier of disinfecting action? A., i, 903.

Müller, C., and Otto Warburg, energy exchange in carbon assimilation by

green cells, A., i, 411.

Müller, Elisabeth. See A. Bornstein. ler, Erich, dehydroxidation alcohols, A., i, 102. Müller,

internal or catalytic dehydroxidation of formaldehyde, A., i, 109.

alcoholic fermentation of formaldehyde by osmium, A., i, 110.

electrochemical oxidation of organic compounds, A., ii, 469.

Müller, Erich [with Menzel and Schubert], cathodic deposition of tellurium and selenium from their oxy-acids and their electroanalytical estimation, A., ii, 390.

Müller, Erich [with K. Sponsel], catalytic dehydroxidation of formic acid,

Å., ii, 558.

Müller, Erich, and Hans Lauterbach, the electrometric estimation of cyanides in the presence of haloids, A., ii, 403.

electrometric titration of ferrocyanides, A., ii, 795.

electrometric determination of nickel with silver nitrate, A., ii, 875.

Müller, F. See Lothar Wöhler.

Müller, Fr. See Alfred Thiel.

Müller, Friedrich, the establishment of the international system of normal wave-lengths, A., ii, 725.

Müller, Hans, the relation between fats and carbohydrates, A., i, 486.

the alcoholic fermentation of formaldehyde, A., i, 809.

Müller, Hans, and Leo Müller, the fermentation of glycerol in presence of sulphur, A., i, 904.

Müller, Hans. See also A. Jung, and

Hans Rupe.

Müller, John H., separation of germanium and arsenic, A., ii, 320.

Müller, John H., and Nicol Smith, germanium hydride, A., ii,

Müller, John H. See also Frederick S. Hammett.

Müller, Karl Otto. See Kurt Brand, and Hans Pringsheim.

Müller, Leo. See Hans Müller.

Müller, Robert, the electrochemistry of non-squeous solutions. I. Measurement of current-density and potential difference in the electrolysis of metallic

salts in pyridine, A., ii, 612.

Müller, Robert, and Alois Duschek, the electrochemistry of non-aqueous solutions. II. Decomposition potential and electrode potentials in the electrolysis of pyridine solutions of silver nitrate, and the potential of silver in these solutions, A., ii, 612.

these solutions, A., ii, 612.

Müller, Robert, and Franz Hölzl, electromotive behaviour of aluminium, A.,

ii, 341.

Müller, Robert, and Reinhold Hönig, the preparation of a silver amalgam of the composition Hg₃Ag₂ by precipitation from a solution of silver nitrate in pyridine, A., ii. 500.

Müller, Robert. See also Robert Kremann. Müller, Robert, Komandit-Gesellschaft, gas generator with washing apparatus, A., ii, 706.

Müller, W., corrosion of copper by salt solutions, A., ii, 645.

Mugdan, Susanne. See Otto Ruff.

Muguet, lead in the uranium minerals of Madagascar, A., ii, 216.

Muirhead, Constance M. M. See Violet Dimbleby.

Mukai, G., the action of carbon dioxide on salt and water distribution in blood, A., i, 287.

Mukerji, Dhirendra Nath, colouring matters from 1:2:4:5-tetrahydroxy-benzene and related substances, T., 545.

vat dyes of the azo-series, T., 2879.

Mukherjee, Jnanendra Nath, the origin of the charge of a colloidal particle and its neutralisation by electrolytes, A., ii, 198.

the adsorption of ions, A., ii, 689.

Mukherjee, Jnanendra Nath, and Basil Constantine Papaconstantinou, an experimental test of Smoluchowski's theory of the kinetics of the process of coagulation, A., ii, 694.

Muller, Joseph Auguste, the degree of molecular polymerisation of substances under critical conditions, A., ii, 820.

Muller, Joseph Auguste, and A. Foix, the estimation of hydrogen and its separation from gaseous paraffins by means of palladious chloride, A., ii, 655. the estimation of small quantities of

the estimation of small quantities of gold as colloidal gold by the colorimetric method. A., ii, 662.

metric method, A., ii, 662.

Mulliken, Robert S., separation of isotopes by thermal and pressure diffusion, A., ii, 492.

Mulliken, Robert S., separation of liquid mixtures by centrifuging, A., ii, 686.

Mulliken, Robert S., and William Draper Harkins, separation of isotopes; theory of resolution of isotopic mixtures by diffusion and similar processes; experimental separation of mercury by evaporation in a vacuum, A., ii, 295.

Mumm, Otto, and Else Gottschaldt, the hydrogen esters of 2:6-dimethylcinchomeronic acid, A., i, 861.

apophyllenic acid and aa'-dimethylapophyllenic acid, A., i, 862.

Muntwyler, O. See Hermann Staudinger.

Murakawa, Gorô. See Heisaburô Kondô. Murayama, Yoshiharu, chemical constituents of a Chinese drug "Hsiung Ch'uang." I. A. i. 310.

Ch'uang." I., A., i, 310.

Murayama, Yoshiharu, and Shinjiro
Aoyama, constituents of the Japanese
common earthworm. II. A., i, 898.

common earthworm. II., A., i, 898.

Murayama, Yoshiharu, and Takeyoshi

Itagaki, essential oil of Nepeta japonica, Maxim. I., A., i, 44.

Murayama, Yoshiharu, and Kenjiro Mayeda, kawa-kawa resin. A., i, 265. Murdick, P. P. See C. J. Wood.

Muresanu, Augustin, the distribution of chloride between corpuscles and plasma, A., i, 290.

Murlin, John Raymond, [imperfect digestion and] the amino-acid fractions and hippuric acid in the urine of pellagrins, A., i, 965.

Murmann, Ernst, laboratory notes [estimation of silica, phosphorus in iron,

etc.], A., ii. 226.

estimation of minute quantities of methane, A., ii, 591.

Murphy, A. J. See C. A. Edwards.

Murray, Humphrey D., congulation of colloids by electrolytes, A., ii, 37.

Murschhauser, Hans, which carbohydrates are excreted in the urine of sucklings when the sucrose in the food exceeds the assimilation limit? a method for the quantitative estimation of several carbohydrates simultaneously in the urine, A., i, 198

mutarotation of dextrose under the influence of sodium chloride, A., i,

the influence of sodium chloride on the mutarotation of dextrose in hydrochloric acid solution. I., A.,

i, 322.

influence of sodium chloride on the mutarotation of dextrose in alkaline solution. I and II., A. i, 432.

Murschhauser, Hans, the law governing the constants of mutarotation of dextrose and the concentration of acid, A., i, 432.

the rotation of dextrose in solutions of trisodium phosphate; mutarotation as an analytical method, A., ii, 92. Murtagh, J. See O. M. Pico.

Muschel, Anna, the darkening of carbohydrate containing nutrient media by Bacillus mesentericus var. niger, A., i, 1095.

Mussler, Ch. See W. D. Treadwell. Muttelet, C. F., detection of vegetable oils in animal fats; the phytosteryl acetate test, A., ii, 168.

detection of coconut oil in butter, A.,

ii, 236.

Myrbäck, Karl. See Hans von Euler. Myers, Burton A., and Marian C. Shevky, the estimation of inorganic phosphorus in blood plasma by Bell and Doisy's method, A., ii, 455.

N.

Nägeli, C. See Paul Karrer.

Nagahashi, M. See Joseph Barcroft. Nagai, Shoichiro, preparation of piperon-

aldehyde from isosafrole by the action of ozone, A., i, 839.

Nagai, Willy, See Yaji Shibata.
Nagai, W. N., [preparation of] dihydroxyphenylmethylaminoethanol hydrochloride, A., i, 652.

Nagaoka, H., and Y. Sugiura, the structure of the bismuth lines, A., ii,

Nagaoka, Kwanto. See Riko Majima. Nágel, Josef, estimation of tin in bearing

metals, A., ii, 721.

Nagel, W. See Carl Dietrich Harries. Naik, Kuverji Gosai, and Mahadeo Dattatraya Avasare, the formation ofdithioketones properties (R₂C:S.S) and dithio-ethers (R₂S:S). III., T., 2592.

В. Naiman, See AlvinSawyerWheeler.

Nakagawa, Tomoichi, the relation of salivary to gastric secretion, A., i, 789. Nakajima, Tomoichi. See Heisaburô

Nakatogawa, Shaichi, and Shamei Kobayashi, oil from the heads of sea animals of the family Delphinidee, A., i, 701.

Nanji, Dinshaw Rattonji. See Arthur Robert Ling.

Narayan, \tilde{A} . L., and D. Gunnaiya, absorption of potassium vapour in the associated series, A., ii, 679.

Narayan, A. L., and G. Subrahmanyam, a modified form of double slit spectrophotometer, A., ii, 329.
Nash, Thomas P., jun., the kidney

factor in phloridzin diabetes, A., i, 497.

Nash, Thomas P., jun., and Stanley Rossiter Benedict, the ammonia content of the blood and its bearing on the mechanism of acid neutralisation in the animal organism, A., i,

the ammonia content of blood, A., i, 483.

Nasini, A. G. See Umberto Sborgi. Nathansohn, A., [biochemical electrochemical oxidation of organic compounds], A., ii, 421.

Nauen, Ernst. See Erwin Ott.

Navias, Louis. See Edward Wight Washburn

Naylor, Nellie M. See Roemer Rex Renshaw.

Neale, Sidney Maurice, influence of the solvent on ionisation and the accompanying heat effect, A., ii, 420.

Neave, A. S. See Ellwood B. Spear. Neber, P. W., free o-aminophenylacetic acid, its esters and transformations, A., i, 545.

Negelein, Erwin. See Otto Warburg. Neighbors, De Witt, A. L. Foster, S. M. Clark, J. E. Miller, and James R. Bailey, isopropyl-, menthyl-, and bornyl-semicarbazides; reduction of phenylhydrazones, A.. i, 880.

Nelken, Annemarie. See Julius von

Nelson, Alta. See Katharine Blunt. Nelson, Burt E., and Helen A. Leonard, identification of alkaloids under the microscope from the form of their picrate crystals, A., ii, 327.

Nelson, John Maurice, and David I. Hitchcock, the activity of adsorbed invertase, A., i, 184.

uniformity in invertase action, A., i,

388. Nelson, John Maurice. See also F. S.

Granger.

Nelson, O. A., and C. E. Senseman, vapour pressure determinations on naphthalene, anthracene, phenanthraquinone anthrene, and between their melting and boiling points, A., i, 245.

estimation of anthraquinone, A., ii,

Nemec, Antonin, and František Duchoň, is it possible to determine the value of seeds by a biochemical method? **A**., i, 94.

Němec, Antonin, and František Duchoň, the occurrence and action of saccharo-phosphatase in the organism of the plant, A., i, 206.

an indicatory method for evaluating the vitality of seeds by a biochemical

method, A., i, 411.

Němeček, H., a new form of ozoniser, A., ii, 841.

See Gerhardt Katsch. Német, Géza. Nemours & Co., E. J. du Pont de. Arthur Percival Tanberg.

Nepveux, F. See R. Goiffon, and Henri Labbé.

Nersessov. See Fromholdt. Netz, A. See Robert Stollé.

Neuberg, Carl, and Bernhard Arinstein, the nature of the butyric acid and butyl alcohol fermentation; fixation of acetaldehyde as a decomposition product; transformation of the aldol of pyruvic acid into butyric acid; production of higher fatty acids from sugar, A., i, 91.

Neuberg, Carl, and Clara Cohen, the formation of acetaldehyde and the realisation of the second form of fermentation with various fungi, A., i,

304.

Neuberg, Carl, and O. Dalmer, crystalline salts of some physiologically important sugar phosphates, A., i, 920.

Neuberg, Carl, and Julius Hirsch, classification of carboligase, A., i, 600.

Neuberg, Carl, and Ludwig Liebermann, monosulphates of dextrose sucrose. III., A., i, 222. carboligase. II., A., i, 305.

Neuberg, Carl, and Heinz Ohle, sulphur in agar, A., i, 323.

carboligase. III. and IV., A., i, 480, 540.

Neuberg, Carl, Elsa Reinfurth, and Marta Sandberg, stimulants of alcoholic sugar fission. VII., A., i, 306. Neuberg, Carl, and Marta Sandberg,

stimulants of alcoholic sugar fission. VIII. and IX., A., i, 408.

Neuberger, A. See W. Meigen.

Neuburger, Maximilian Camillo, isotopy of the radio-elements and Meitner's nucleus model, A., ii, 107. calculation of the branching relationships for dual a-disintegration and

the Meitner nucleus model, A., ii,

the Meitner nuclear model of the radio-elements as the basis of a relationship between the range and total number of nuclear particles of the a-radiators, A., ii, 183.

Neuburger, Maximilian Camillo, existence of isotopes of uranium and the Meitner nuclear model, A., ii, 185. a new model of the nucleus, A., ii, 208.

isotopy of the radio-elements, A., ii, 250.

existence of isotopes of the disintegration products of actinium and the Meitner nuclear model, A., ii, 340.

the atomic weight of isohelium, A., ii, 365.

the genesis of the elements, A., ii, 365.

the Neuburger nuclear model, A., ii, 702, 839.

Neugebauer, H., dispersoid chemistry of

gypsum. II., A., ii, 643. Neugebauer, W. See Fritz Mayer.

Neuhausen, Benjamin S., free and bound water in the blood, A., i, 696. condition of electrolytes in the blood,

A., iş 891.

sodium amalgam electrode for the determination of sodium ion [concentration], A., ii, 610.

solubility of gases in liquids, A., ii, 621.

electrolytic preparation of calcium amalgam, A., ii, 643.

Neuhausen, Benjamin S., and Eli Kennerly Marshall, jun., electrochemical study of the condition of several electrolytes in the blood, A., i, 1085.

Neuhausen, Benjamin S., and Walter A. Patrick, organogels of silicic acid,

A., ii, 144.

system, ammonia-water as a basis for a theory of the solution of gases in liquids, A., ii, 264.

Neumann, Bernhard, [with Bergdahl, Broy, and Karwat], the catalytic formation of hydrogen chloride from hydrogen and chlorine without explosion, A., ii, 44.

Neumann, Emanuel Franz. See Anton Kailan.

Neumann, Felix. See Franz Faltis.

Neumann, Heinrich. See Roland Scholl. Neumann, O. See Arnold Eucken.

Neuschlosz, S. M. See Alexander Ellinger, and Otto Riesser.

Neuwirth, Isaac, carbohydrate metabolism. III. A study of urinary sugar excretion in twenty-six individuals, A., i, 485.

Neuwirth, Isaac, and Israel Simon Kleiner, the blood-sugar content of capillary blood as compared with that

of venous blood, A., i, 1208.

Nevens, W. B. See T. S. Hamilton, and H. H. Mitchell.

Neville, Harvey A. See Hugh Stott Taylor.

Newbery, Edgar, the overvoltage of the mercury cathode, T., 7.

Newcomb, Walter H. See Oliver Kamm.

Newman, F. H., active modifications of hydrogen and nitrogen produced by a-rays, A., ii, 279.

absorption of hydrogen by elements in the electric discharge tube, A., ii, 546.

active hydrogen and nitrogen, A., ii, 639.

Nicholas, Henry O. See Harry B. Weiser.

Nichols, Edward L., and Horace L. Howes, emission bands of erbium oxide, A., ii, 411.

the luminescence of incandescent solids, A., ii, 597.

Nichols, Edward L., and D. T. Wilber, the luminescence of certain oxides sublimed in the electric arc, A., ii, 105.

flame excitation of luminescence, A., ii, 806.

Nichols, H. J., the production of carbon dioxide by the typhoid bacillus and the mechanism of the Russell double sugar tube, A., i, 501.

Nicholson, John William, the binding of electrons by atoms, A., 544.

the difference between series spectra of isotopes, A., ii, 599.

Nicholson, Samuel T., jun. See Roger S. Hubbard.

Nickelson, Stanley Arthur. See Sidney Hartley Bales.

Nickolls, Lewis Charles. See Christopher Kelk Ingold.

Nicloux. Maurice, and Georges Welter, does cyanic acid exist in the blood? A., i, 789.

quantitative gravimetric micro-analysis of urea; application to the estimation of urea in 1 c.c. of blood, A., ii, 170.

quantitative microanalysis, A., ii, 779.

Nicolardot, Paul, Max Geloso, and Antoine Réglade, the estimation of

manganese by Knorre's persulphate method, A., ii, 398.

Nicolet, Ben H., C₁₈ fatty acids. II.

The relation of oleic and elaidic acids to their halogen additive products, A., i, 106.

the existence and reactions of positive halogen attached to earbon in aromatic compounds, A., i, 121.

Nicolet, Ben H., and Henry L. Cox, C₁₈ fatty acids. III. Four tetrahydroxystearic acids derived from linoleic acid, and their significance with regard to the linoleic acid of common oils, A., i,

Nicolet, Ben H., and Alfred E. Jurist, C₁₈ fatty acids. IV. A rearrangement of the benzilic acid type in the aliphatic series, A, i, 622.

Nicolet, Ben H., and Joseph J. Pelc, C₁₈ fatty acids. V. Molecular rearrangements in some derivatives of unsaturated higher fatty acids, A., i,

Niemann, W. See William Küster. Nierenstein, Maximilian, catechutannins. I. Paullinia tannin, T.,

the constitution of catechin. IV., T., 604.

Waage's phytochemical synthesis of phloroglucinol from dextrose, A., i, 136.

gallotannin, A., i, 266.

Nierenstein, Maximilian. See also Howard & Sons, Ltd.

Nieuwland, Julius A. See P. Benedict Oberdoerfer, Lawrence E. Rombaut, and Richard R. Vogt.

Niewiazski, S. See Emil Briner.

Niggli, Paul, crystal structure and atomic constitution. I. and II., A., ii, 36.

Nijk, D. R., comparative study of ringsubstituted phenylphosphinic phenylarsinic acids, A., i, 960. Nikitin, N. I., pressure of saturated

carbonyl chloride vapour, A., ii, 847.

Nikolai, Ferdinand, iodometric estimation of arsenic and antimony sulphides, A., ii, 585.

Nilsson, Harold, hesperidine-like substances in the Umbellifera, A., i, 211.

Nishikawa, Hidejiro, and Robert Robinson, the hydroxybenzoylphloroglucinols, T., 839.

Nishizawa, Yushichi, composition of bird-lime. II., A., i, 652.
Nitsche, Rudolf. See Erich Krause,

and Hermann Leuchs.

See Grete Egerer-Scham. Nixon, C. E. Noddack, W. See John Eggert.

Nodder, Charles Reynolds, flax and I. Behaviour and kindred fibres. structure of textile fibres, and a convenient method of distinguishing flax

from hemp, A., ii, 791.

Nolan, P. J., evidence for the existence of homogeneous groups of large ions,

A., ii, 251.

Nolte, Otto, detection and estimation of nitrate nitrogen in urine and serum, A., ii, 583.

See Henri Labbé. Nomidis, Ménélas.

Nonnenbruch, W., concentration of the blood. II. The action of diuretics of the purine group on the exchange of substances between the tissues and the blood, A., i, 79.

Nordefeldt, E., importance of acidity for cyanohydrin synthesis and the nonexistence of Rosenthaler's syn-emul-

sin, A., i, 66.

the asymmetric action of emulsin in the benzaldehydecyanohydrin synthesis, A., i, 1077.

Nordlund, Folke. See Hans von Euler. Nordström, A. M., phenylcamphenol, A., i, 944.

Norgaard, A., influence of water supply on the content of reducing substances in the blood and urine, A., i, 892.

Norgaard, A., and H. C. Gram, relation between the chloride content of the blood and its volume per cent. of cells, A., i, 287.

Norman, G. F. See Carl L. A. Schmidt.

Normand, G. See André Wahl.

Normann, W., catalytic addition of hydrogen; influence of oxygen on the catalyst, A., ii, 631.

Norris, Frederick Walter. See Donald

Herbert Frank Clayson.

Norris, (Miss) Mabel Harriet [with (Miss) D. H. Falkner, and (Miss) M. C. Price], the constitution of soap solutions; hexadecanesulphonic (cetylsulphonic) acid and other sulphonates, T., 2161.

Norris, (Miss) Mabel Harriet, and James William McBain, a study of the rate of saponification of oils and fats by aqueous alkali under various con-

ditions, T., 1362.

Norrish, R. G. W., transition elements and the octet theory : a new arrangement of the rare earth elements in the periodic classification, A., ii, 211.

Northrop, John H., the inactivation of I. and II. The equitrypsin. librium between trypsin and the inhibiting substance formed by its action on proteins. III. Spontansous inactivation, A., i, 282.

kinetics of trypsin digestion, A., i,

Nostitz, von, basic exchange in soils, A., i, 511.

Notenbaart, L., rapid estimation of acetic and butyric acids in mixtures, A., ii, 791.

Nowak, Gisela, and Julius Zellner, comparative plant chemistry. berry fruit of some Caprifoliaceæ, A., i, 615.

See Frederick S. Nowrey, Joseph E. Hammett.

Noyes, Arthur Amos, and H. A. Wilson, thermal ionisation of gaseous elements at high temperatures; confirmation of the Saha theory, A., ii, 810.

Noyes, William Albert, attempt to prepare nitro-nitrogen trichloride. II. Behaviour of mixtures of nitrogen and chlorine in a flaming arc, A., ii, 143.

Noyes, William Albert, and Walter F. Goebel, catalysis of the formation and hydrolysis of acetamide by acetic acid, A., i, 1127.

Noyes, William Albert, and Thomas A. Wilson, ionisation constant of hypochlorous acid; evidence for amphoteric ionisation, A., ii, 692.

Noyes, William Albert. See also Howard M. Chiles, George H. Coleman, and Harry L. Lochte.

Noves, William Albert, jun. See George Ernest Gibson.

Noyons, A. K., physical method for the estimation of carbon dioxide in the respiratory air, A., ii, 868.

Nüsslein, J. See Walther Dilthey. Nugent, T. C., an inhibition period in the separation of an emulsion, A., ii, 625.

Nybergh, Bertil, the mobility and valency demand of the ethyl group in the pinacolin transformation, A., i, 802.

the reverse pinacolin transformation, A., i, 918.

Nyswander, R. E., Samuel Colville Lind, and R. B. Moore, the spectrum of radium emanation, A., ii, 803.

0

Oakes. EarleT., and Henry M. Salisbury, use of phthalate solutions for hydrogen electrode standards, A., ii, 468.

Oakes, Earle T. See also Clarke E. Davis.

Milivoj, the reaction Obajdin, magnesium salts with acid potassium

pyrantimonate, A., ii, 501.

Obaton, Fernand. See Marc Romieu.

Oberbach, J. See Alfred Benrath. Oberdoerfer, P. Benedict, and Julius A. Nieuwland, compounds of acetylene with silver phosphate and silver arsenate, A., i, 515.

Obladen, A. See Alfred Benrath.

Oblata, J., low-voltage standard cells, A., ii, 343.

O'Brien, H. R., and W. L. Parker, solubility of carbon monoxide in serum and plasma, A., i, 394.

Ochi, Hideo, semicarbazide hvdro-

chloride, A., i, 723. Ochi, Shuichiro, Yoichi Onozawa, and The Tokyo Industrial Laboratory, preparation of acetaldehyde from acetylene, A., i, 523.

Ochs, Kurt. See Karl Ziegler.

Oddo, Bernardo, and R. Binaghi, action of polyhalogenated compounds of methane and ethane on magnesyl [magnesium alkyl] compounds, A., i, 313.

new synthesis of primary alcohols, and constitution of hydrogen per-

oxide, A., i, 314.

Oddo, Bernardo, and G. Sanna, new syntheses in the indole group. VIII., A., i, 371.

Oddo, Giuseppe, mesohydry. II., A., ii,

mesohydry. III. Relation between the affinity of acids and the atomic ratio O:H in their functional groups, and the constitutional formulæ of the acids, A., ii, 367.

See Walter A. Oddy, Harold G. Lawrance.

Odelga, Friedrich. See Robert Kremann.

Oehlert, H. See Richard Stoermer.

Öholm, Lars William, thermostat arrangement for the determination of the effect of temperature on diffusion, A., ii, 621.

Oesterle, O. A., volatile substances from the bark of Rhamnus frangula, A., i,

hyssopin, A., i, 849.

Oesterlin, C. See Georg Schroeter.

Östling, Gustav Jim, the Grignard reaction, A., i, 843.

Offner, M. See Joaquin Enrique

Zanetti.

Ogasawara, K. See E. Tokuoka.

Ogata, Akira, and Chaji Miyashita, homologues of menthol, A., i, 844.

Ohle, Heinz, carbohydrate-sulphates. IV., A., i, 986. the constitution of vacciniin, A., i, 1018.

Ohle, Heinz. See also Carl Neuberg. Ohlmer, Elsa. See A. Morgen.

Ohlsson, Erik, dependence of the action of succinodehydrogenase on hydrogenion concentration, A., i, 785.

Ohma, S., classification of aromatic odours in sub-classes, A., i, 1090.

Ohmann, O., preparation of aluminium carbide and of marsh gas, A.,

Okada, Seizaburo, and Toworu Hayashi, the amino-acid nitrogen content of the

blood, A., i, 483. Okagawa, M. See Yashiro Kotake.

Okazaki. See Riko Majima.

Okubo, Junzô, structure of the second cyanogen band, A., ii, 601.

the lanthanum violet bands and the associated lines, A., ii, 676.

Okushima, Kwanichiro, caffeine excre-tion in urine after tea and coffee drinking in man, A., i, 703.

Oldenberg, Otto, the structure of the Balmer series, A., ii, 410.

fine structure of the red hydrogen line, A., ii, 725.

Oleson, Harriet Curry. See Katharine Blunt.

Oliveri-Mandalà, E., behaviour of azides of acids, A., i, 473.

action of hydrogen peroxide on nitriles and on amides; formation of hydroxamic acids, A., i, 544.

mechanism of reaction of aliphatic diazo-compounds, A., i, 994.

bases obtained in the decomposition of the azides of thiocarbamic acids, A., i, 1007.

addition of azoimide at contiguous double linkings. VIII. 5-Anilino-1-phenyltetrazole and the azide of dithiocarbamic acid, A., i, 1069.

Oliveri Mandalà, E., and G. Comella, normal chromium azide and the formation of complex salts, A., ii,

Olivier, E., the preparation of lead test-papers and notes on the titration of zinc with sodium sulphide, A., ii,

Olivier, Simon Cornelis Johannes, the structural formula of caoutchouc

according to Harries, A., i, 45. the influence of some substituents in the benzene ring on the mobility of chlorine in the side-chain in its relation to the problem of substitution in the benzene ring, A., i,

the chlorination of benzyl chloride, A., i, 726.

Olmstead, L. B. See R. O. E. Davis. Olsen, O., the action of kaolin on the terminal component and on the tributyrin hydrolytic capacity of guinea pig's serum, A., i, 292.

Olsson, Hugo. See Lennart Smith.

Olsson, Urban, inhibition phenomena in amylases, A., i, 390; ii, 401.

Onnes, Heike Kamerlingh, and J. Palacios Martinez, vapour pressure of hydrogen; determinations in the region of liquid hydrogen, A., ii,

Onnes, Heike Kamerlingh. See also J. Palacios Martinez, Emile Mathias, and Jean Timmermans.

Ono, Kashichi, electrolytic reactions of naphthalene and its derivatives. Electrolytic oxidation of a-naphthylamine and ar-tetrahydro- α -naphthylamine, A., i, 1008.

Onozawa, Yoichi. See Shuichiró Ochi. Oparin, Alexander, the green respira-tory pigment and its importance in the oxidation of protein substances in the sprouting seeds of Helianthus annuus, A., i, 309.

Opfermann, estimation of α -, β -, and γ-cellulose, A., ii, 665.

Oppenheimer, E. See Fr. Baur.

Oppenheimer, Gertrud. See Richard Willstätter.

Orcel, J., composition of aerinite, A., ii, 651.

Orékhoff, Alex., and Marc Tiffeneau, the dehydration of benzylhydrobenzoin $(\alpha\beta\gamma$ -triphenylpropane $\alpha\beta$ -diol); formation of benzyl diphenylmethyl ketone (semipinacolic transposition) and of diphenylindene (cyclisation), A., i, 458.

Orlova, Lidie. See Nikolai Schilov.

Ormandy, William R., and E. C. Craven, the system ethyl alcohol-wateraromatic hydrocarbons from 30° to -30°, A., i, 215.

Orndorff, William Ridgely, R. C. Gibbs, M. Scott, and S. D. Jackson, the absorption spectra of o-cresolsulphon-

phthalein, A., ii, 806.

Orndorff, William Ridgely, and Louise o-4'-hydroxybenzoylbenzoic Kelley, acid and some of its derivatives, A., i, 833.

Orthner, Ludwig. See Karl Freudenberg, and Kurt Heinrich Meyer.

Ortner, Karl. See Wilhelm Manchot. Orton, C. R., Elmer Verner McCollum, and Nina Simmonds, the presence of the antineuritic substance, watersoluble B, in chlorophyll-free plants, A., i, 974.

Osaka, Yukichi, the solubility of calcium carbonate in water in equilibrium with a gaseous phase containing carbon dioxide, 830.

Osaka, Yukichi, and Kinji Ando, the compounds of carbamide and benzoic acid, A., i, 1127.

Osborne, Thomas Burr, Alfred John Wakeman, and Charles Samuel Leavenworth, the proteins of the alfalfa plant [lucerne], A., i, 99. water-soluble constituents of the alfalfa plant [lucerne], A., i, 1104.

Osswald, Philipp. See Wilhelm Windisch.

Ost, Hermann, and G. Knoth, celloisobiose, A., i, 526.

Osterburg, Fritz. See Hermann Leuchs. Osterhout, Winthrop John Vanleuven, direct and indirect determinations of permeability, A., i, 308.

Ostermeier, Hermann. See Hugo Weil. Ostertag, Rudolf. See Hartwig Franzen. Ostwald, Wa., homogeneity and dis-

persity, A., ii, 131.

Ostwald, Wolfgang, dispersoid analysis of non-aqueous systems, A., ii, 199.

electro-adsorption as a purely chemical process, A., ii, 427.

Ostwald, Wolfgang, and Friedrich Vincenz von Hahn, a kinetic precipitation measurer, A., ii, 205.

Ostwald, Wolfgang, and Ramon de Izaguirre, more general theory of the adsorption of solutions, A., ii,

Ostwald, Wolfgang, and Alfred Kuhn, acid taste, A., i, 84.

rôle of acids in peptic digestion, A.,

Oswald, Adolf, the physiological action of metallic ammines and allied compounds, A., i, 498.

Oswald, Victor. See Robert Kremann. Otsuka, Ichiro. See Takaoki Sasaki.

Ott, Erwin, the constitution and tautomeric equilibrium of the two phthalic acid tetrachlorides, A., i, 834. preparation of cyanuric triazide, A. i, 1128.

t, Erwin, and Fritz Eichler [with Otto Lüdermann, and Heinrich Hei-Ott, mann], natural and artificial peppersubstances. II. The chavicine of pepper-resin, the primarily active constituent of black pepper, A., i, 1026.

Ott, Erwin, and Bernhard Löpmann, simple cyano- and cyanuric com-pounds. III. Malononitrile and its

halogenation, A., i, 643. Ott, Erwin, and Ernst Nauen, vanillin isomerides of the resorcyl series. A., i.

Ott, Erwin, and Karl Schmidt, the preparation of carbon suboxide on a larger scale and the properties of pure

carbon suboxide, A., ii, 641

Ott, Erwin, and Kurt Zimmermann, natural and artificial pepper-substances and the relation between chemical constitution and peppery

taste, A., i, 137. Ottenstein, Berta, estimation of urinary colloids by the gold number, A., i,

Otto, J. See Ludwig Holborn. Owen, E. A., and Winifred E. Page. estimation of the radium content of radioactive luminous compounds, A., ii, 108.

Oxley, A. E., magnetism and atomic structure. II. The constitution of the hydrogen-palladium system and other similar systems, A., ii, 469.

P.

Paal, Carl, and Hermann Steyer, colloidal copper hydroxide, A., ii, 216.

variously coloured modifications of colloidal copper, A., ii, 294.

III. Colloidal copper amalgams. amalgam, A., ii, 446.

Paassen, P. van, calcium in the blood, A., i, 1208.

See Vittorio Cuttica. Paciello, A. Paddon, W. W., dyeing of deaminated

wool, A., i, 608. mordanting of wool with potash alum, A., ii, 822.

Pados, Maurizio, absolute value of the energy of the linkings between the atoms of compounds, A., ii, 27.

specific heats. II. A., ii, 348. Paetzold, Hans. See Heinrich Biltz.

Page, Winifred E. See E. A. Owen. Pahle, Kristian. See Haakon Goldschmidt.

Charles. See WaldemarPalache, Lindgren.

Palfray, L., neutral homocamphoric esters and their products of reduction, A., i, 548.

Palkin, Samuel, and M. Harris, quino-I. Preparation of 6-ethoxy-2:4-dimethylquinoline, A., i, 951.

Palladin, Wladimir, and Helene Popov, the genesis of amylase and maltase in plants, A., i, 614.

Palmer, Albert Donald. See Harold King.

Palmer, Charles Shattuck, and Roger Adams [with W. A. Carothers, E. E. Parks, G. O. Burr, and J. S. Pierce], the reactions of the arsines. II. Condensation of aromatic primary arsines with aldehydes, A., i, 785.

Palmer, Leroy S., influence of various antiseptics on the activity of lipase, A., i, 886.

the effects of impurities on the ionisation potentials measured in thermionic valves, A., ii, 108.

Palmer, William George, the catalytic activity of copper, A., ii, 437.

Palmer, Walter W., Dana W. Atchley, and Robert F. Loeb, the regulation of osmotic pressure. II. The effect of albumin on the conductivity of a sodium chloride solution, A., i, 692.

Palmer, Walter W. See also Henry Jackson, jun.

Pamfilov, A. V., oxidation of o-toluenesulphonamide, A., i, 928.

rôle of chromates in electrolysis for

chlorate, A., ii, 712.

Pamfilov, A. V., and N. N. Petin, kinetics of inductive processes; Schönbein's reaction, A., ii, 835.

Paneth, Fritz, peculiar catalytic action in chemical synthesis by glow discharge, A., ii, 363.

radioactive indicators, A., ii, 785.

Paneth, Fritz, and Adolf Johannsen,

polonium hydride. II., A., ii, 777. Paneth, Fritz, Adolf Johannsen, and Max Matthies, the preparation of gaseous metallic hydrides from alloys and solutions, A., ii, 383.

Paneth, Fritz, Max Matthies, and Edgar Schmidt-Hebbel, the preparation of gaseous metallic hydrides by the spark discharge, A., ii, 383.

Paneth, Fritz, and Edgar Schmidt-Hebbel, germanium hydride, A., ii,

Paneth, Fritz, and Walter Vorwerk, method for the determination of the surface of adsorbing powders, A., ii, 618.

thickness of the adsorbed layer in the adsorption of dyes by crystals, A., ii, 619.

Paolini, Vincenzo, isomeric amyrols, A., i, 754.

Paolini, Vincenzo, and S. Scelba, polysalicylides, A., i, 746.

Papaconstantinou, Basil Constantine. See Jnanendra Nath Mukherjee. Papendieck, A. See Otto Schumm.

Papish, Jacob, germanium. II. Identification of germanium by its visible

arc spectrum, A., ii, 163. flame reactions of thallium, A., ii, 528.

Papish, Jacob. See also Louis Monroe Dennis.

Paris, G., the biochemistry of tobacco. II. Tobacco seeds, A., i, 211. Parish, H. C. See Roger C. Griffin.

Parker, F. W., displacement method for obtaining soil solution, A., i, 511.

classification of soil moisture, A., i, 616.

Parker, H. K. See L. van Doren.

Parker, William Bayley, and Gartha Thompson, the variation of refractive index and density of benzene with temperature, T., 1341.

Parker, W. L. See Vernon C. Allison, G. W. Jones, and H. R. O'Brien.

Parkes, Deric William. See Frederick Daniel Chattaway.

Parkhurst, Reginald B. See William Thompson Smith.

Parks, E. E. See Charles Shattuck Palmer.

Parnas, Jakob K., and Richard Wagner, observations on sugar synthesis. I., A., i, 487.

estimation of small quantities of nitrogen by Kjeldahl's method, A., ii, 312.

Parnas, Jakob K. See also Richard Wagner.

Parr, Paul. See Bruno Emmert. Parsons, Llewellyn B. See James H.

Walton. Parsons, Leon Woodman. See Gregory Paul Baxter.

Parsons, T. R. See Joseph Barcroft. Parsons, W. See Joseph Barcroft.

Partington, James Riddick, the energy of gaseous molecules, A., ii, 614. chemical constants of some diatomic

gases, A., ii, 839.

Partington, James Riddick, and H. J. Cant, specific heats of ammonia, sulphur dioxide, and carbon dioxide, A., ii, 191.

Partington, James Riddick. See also Frank Ward Bury, and (Mrs.) K. Stratton.

Partos, S., the hæmochrome of Herzfeld and Klinger, A., i, 597.

Pascal, Paul, preparation of ethyl alcohol, A., i, 3.

magneto-chemical investigation of the constitutions in mineral chemistry; the acids of phosphorus, A., ii, 285.

magneto-chemical investigations of constitutions in mineral chemistry; the acids of arsenic, A., ii, 564.

Paschke, Fritz, derivatives of straw lignin, A., i, 325.
Pascual Vila, J. See Antonio García

Banús.

M., isonitriles. III. Reactions with the hydrates of halogenated aldehydes, A., i, 731.

Passini, Fritz, degradation of bile pigments by anærobic putrefactive in-

testinal bacteria, A., i, 966.

Pastureau, and Henri Bernard, the chlorohydrin of mesityl oxide and its transformation into the chlorohydrin of tetramethylglycerol, A., i, 717.

Paterno, Emanuele, aniline arsenates, A., i, 731.

See H. M. Randall. Paton, R. F.

Patrick, Walter A., and F. V. Grim, heat of wetting of silica gel, A., ii, 122.

See also L. Y. Patrick, Walter A. Davidheiser, Edward O. Holmes, jun., J. Fitch King, and Benjamin S. Neuhausen.

Patterson, Jocelyn. See James Colquhoun Irvine.

Patterson, R. A. See William Duane. Patterson, Thomas Stewart, a property of ethyl tartrate, T., 1042.

Patty, F. A., the production of hydrocyanic acid by Bacillus pyocyaneus, A., i, 407.

Patzauer, A., reaction for blood with hydrogen peroxide in statu nascendi, A., ii, 172.

Paul, Arthur E., and Erwin H. Berry. the Kjeldahl nitrogen method and its modifications, A., ii, 82.

Pauli, Wolfgang, mobility of protein ions, A., i, 478.

Pauli, Wolfgang. See also Mona Adolf, and Albert Fernau.

Pauli, W., jun., model of the ionised hydrogen molecule, A., ii, 703.

Pauly, Hermann, the oscillation of physical constants in homologous series, A., i, 1.

Pauly, Hermann, and Ernst Ludwig, glyoxalinedicarboxylic acid for the recognition and separation of organic bases, A., i, 953.

glucosamine as the basis of formation of heterocyclic compounds, A., i, 953.

Pavlović, R. See Peter Rona. Pavolini, T. See A. Gaviati.

Payá, M., and Enrique Moles, density of atmospheric nitrogen; a small anomaly in the air of Madrid, A., ii, 762.

Payman, Joseph Baron. See British Dyestuffs Corporation, Ltd.

Payman, William, and Richard Vernon Wheeler, the combustion of complex gaseous mixtures, T., 363.

Payne, Wilbur B. See Merrill C. Hart.

Payne, Wilfred Walter. See Patrick Playfair Laidlaw.

CXXII. ii.

Peacock. David Henry. See David Segaller.

Pearce, J. Newton, and Harry B. Hart, free energy of dilution and the activities of the ions of potassium bromide in aqueous solutions, A., ii,

Archibald Ramsden. Pearson, William Arthur Bone.

Pease, Robert Norton, sizes of atoms in

crystals, A., ii, 428. sizes of atoms in diamond type crystals, A., ii, 634. atoms and electrons, A., ii, 757.

Pease, Robert Norton, and Hugh Stott Taylor, reduction of copper oxide by hydrogen, A., ii, 148.

catalytic formation of water vapour from hydrogen and oxygen in the presence of copper and copper oxide, A., ii, 701.

Pecker, Henri, characteristics of identity of a water distilled from the cherry laurel, A., ii, 537.

Peddie, W., the importance of Whittaker's atomic model and of other atomic models, A., ii, 633.

Pedley, Frank G. See Alfred T. Shohl. Pedotti, Fausto, the influence of lack of calcium in the diet on the respiratory basal metabolism, A., i, 286.

Peiser, E. See Hermann Steudel.

Pekelharing, Cornelis Adrianus, movement of pepsin in agar-agar gels with and without protein, A., i, 388.

Pélabon, Henri [Joseph Léonard Ferdinand], the constitution of selenium, A., ii, 141.

action of selenium on gold, A., ii,

Pelc, Joseph J. See Ben H. Nicolet. Pelkan, K. F., physiology of the phen-I. The estimation of phenols in the blood, A., ii, 399.

Pelkan, K. F., and G. H. Whipple, liver function. III. Phenol conjugation as influenced by liver injury and insufficiency, A., i, 490. physiology of the phenols. II. Ab-

sorption, conjugation, and excre-

tion, A., i, 499. Pelkan, K. F. See also W. R. Bloor. Pellizzari, Guido, action of cyanogen haloids on phenylhydrazine. VI. o-Phenyleneammelyl chloride, A., i,

Pelzer, J. See Paul Jacobsen.

Pemberton, H. V. See Lester F. Hoyt. Penfold, Arthur Ramon, a critical examination of the aromatic aldehydes occurring in certain eucalyptus oils, T., 266.

Penfold, Arthur Ramon, the essential oils of Leptospermum flavescens var. grandistorum and Leptospermum odoratum, A., i, 44. position of the double linking in

piperitone. I. and II., A., i, 259, 1035.

essential oil of the leaves of Doryphora sassafras, A., i, 847.

Penfold, Arthur Ramon. See also Henry George Smith.

Pěnkava, J. See Julius Stoklasa.

Penkner, Wilhelm. See Robert Kremann. Pennycuick, Stuart Wortley, racemic acid in solution, A., i, 624.

Pentimalli, F., protein intoxication. I. Introduction. II. Toxicity of eggalbumin and its derivatives. Toxicity of peptones. IV. Toxicity of milk and its derivatives. V. Behaviour of blood pressure and of respiration. VI. Behaviour of body temperature. VII. Nystagmus. VIII. Morphological changes of the blood, A., i, 302.

Pépin, C., and G. Réaubourg, sulphon-ated derivatives of the naturally occurring sulphidic hydrocarbons, A., ii, 784.

Percy, R. See August Hagenbach.

Pereira. See Giral Pereira.

Perina, G. See G. Canneri.

Perkin, Arthur George, and George Douglas Spencer, some reactions of benzanthrone, T., 474.

Perkin, Arthur George, and Yoshisuke Uyeda, occurrence of a crystalline tannin in the leaves of the Acer ginnala, T., 66.

Perkin, Arthur George, and Thomas William Whattam, some products of the reduction of 2-hydroxyanthraquinone, T., 289.

Perkin, Arthur George. See also Geoffrey Gordon Bradshaw and British Dyestuffs Corporation, Ltd.

Perkin, William Henry, jun., and Alan Francis Titley, conditions of formation of rings attached to the o-, m-, and p-positions of the benzene nucleus. I. The action of sodium on o-phenyl-enediacetic ester, T., 1562.

Perkin, William Henry, jun. See also George Roger Clemo, William Davies, and William Ogilvie Kermack.

Perkins, Granville A., the expression of the octet theory of valence in structural formulæ, A., ii, 138.

unsymmetrical addition to the double bond. I. A theory of the reaction mechanism of the direct union, A., ii, 438.

Perkins, Granville A., the structure of chlorine dioxide and related compounds, A., ii, 441.

Perling, A., the hydrolytic decomposition of the bismuth salts of phenolcarboxylic acids, A., i, 252.

Perman, Edgar Philip, the properties of ammonium nitrate. IV. The reciprocal salt-pair, ammonium nitrate

and sodium chloride, T., 2473. Perquin, J. N. J. See Hein Israel Waterman.

Perren, Edward Arthur. See Christ-

opher Kelk Ingold.

Perrin, Jean, catalysis with special reference to newer theories of chemical I. The radiation theory of action. chemical action; (1) radiation and chemistry, A., ii, 628.

Persch, Walter. See Hans Pringsheim. Peski, A. J. van, the mixed anhydrides of sulphuric acid and carboxylic acids. II. n-Butyrylsulphuric acid, A., i,

Poskov, N. P., solutions, suspensions, colloids, A., ii, 825.

sensitivisation of coagulation processes; colloids as indicators of photo-electric effects, A., ii, 828.

Petényi, Géza, and Heinrich Lax, action of adrenaline on the blood-sugar, A., i, 403.

Peter, A. M. See G. Davis Buckner.

Peters, John P., Glenn E. Cullen, and Joshua Harold Austin, gas and electrolyte equilibria in blood. II The reversibility of the effects of changes in carbon dioxide and oxygen tensions on the carbon dioxide content of defibrinated horse blood, A., i, 1207.

Peters, John P. See also Joshua Harold Austin.

Peters. Walter, the addition of organic bases to metallic salts, A., i, 48.

Petersen, Agnes. See Johannes Nicolaus Brönsted.

Peterson, W. H., Edwin Brown Fred. and J. A. Anderson, fermentation of hexoses and related compounds by certain pentose-fermenting bacteria, A., i, 971.

Peterson, W. H., Edwin Brown Fred, and E. G. Schmidt, fermentation of pentoses by moulds, A., i, 1220. Peterson, W. H. See also

See also O. Brunkow, and Edwin Broun Fred. Petin, N. N. See A. V. Pamfilov.

Petitjean, Fernand, the manipulations preparatory to the estimation of amino-

acids in blood, A., ii, 536.

Peto, Raymond Harold Kelsall. George Ingle Finch.

Petrie, P. A. See John Cunningham McLennan.

Petry, Eugen, conditions for the biological action of Röntgen rays. I., A., i, 204.

Petschacher, Ludwig, micro-analyses by Bang's methods. I., A., ii, 716.

Peyer, J. See Paul Karrer.

Peytral, (Mlle) Eglantine, the mode of sudden pyrogenic decomposition of acetic acid at high temperature, A., i, 219.

the mode of pyrogenic decomposition of methyl acetate at high temperature, A., i, 219.

the mode of pyrogenic decomposition of acetone at high temperature, A., i, 222.

Pfaff, Kaspar. See Fritz Mayer.

Pfannkuch, E. See Karl W. Rosenmund.

Pfanstiel. Robert. See Herbert S. Harned. Pfleiderer, Georg. See Franz Fischer. Pfeiffer, Paul, betaines. I. Theory of

betaines, A., i, 720. Pfeiffer, Paul [with E. Flater], quinhydrones of the maleic anhydride

series, A., i, 341. Pfeiffer, Paul, and Gerhard Haefelin, betaines. II. Betaines of the cinnamic

acid series, A., i, 738. Pfizenmaier, K., and S. Galanos, the estimation of creatinine, A., ii, 797.

Pfund, Marion C. See Annie Louise Macleod.

Pfyl, Balthasar, ash-alkalinity (of foodstuffs), A., ii, 586.

Pfyl, Balthasar, G. Reif, and A. Hanner, detection of formaldehyde

phenols, A., ii, 94.

Philipp, K. See Heinrich Kausch von Traubenberg.

Philippi, Erust, mellitic acid, pyromellitic acid, and their production from carbon by oxidation, A., i, 837.

Philippi, Ernst, and Gertrud Rie, mellitic acid, pyromellitic acid, and their production from carbon by oxidation. I. Oxidation of carbon by nitric acid, A., i, 837.

Philippi, Ernst, Reinhard Seka, and Norbert Froeschl, mellitic acid, pyromellitic acid, and their production from carbon by oxidation. III. Synthesis of pyromellitic acid from commercial xylene, A., i, 837.

Philippi, Ernst, Reinhard Seka, and Lilly Robinson, mellitic acid, pyromellitic acid, and their production from carbon by oxidation. IV. Synthesis of substituted pyromellitic acids, A., i, 837.

Philippi, Ernst, and Richard Thelen, mellitic acid, pyromellitic acid, and their production from carbon by oxidation. II. Oxidation of carbon by sulphuric acid, A., i, 837.

Phillips, Max, the preparation of 6:6'di-a hydroxyisopropylindigotin from

p-cymene, A., i, 955.

Phragmen, Gösta. See Arne Westgren. Piccard, A., and E. Stahel, a new radioactive substance, A., ii, 185.

Piccard, Jean, the steric formula of the molecule of water, A., ii, 212. preparation of catalytic copper, A., ii,

216.

detection of oxygen in organic compounds, A. ii, 389.

Piccard, Jean, and Ray Q. Brewster, [δε-dipropylocttetrapropylethane ane], A., i, 313.

the three aminotriphenylamines, A., i,

370.

Piccard, Jean, and E. Herrmann, the colour of iodine solutions at low temperature, A., ii, 655.

Pichler, A. B., recovery of solvents from extracted substances, A., ii, 715.

Pickering, G. F., and Geoffrey E. Cowlishaw, the relation between the refractive index and the chemical characteristics of oils and fats (glycerides), A., ii, 325.

Pickering, John William, and James Arthur Hewitt, coagulation of the blood I. Some physico-chemical aspects of coagulation, A., i, 393. coagulation of the blood. II. Throm-

bin and anti-thrombins, A., i, 1208. Pickles, Alwyn, reduction of ferric chloride, A., ii, 299.

Pico, O. M., and J. Murtagh, estimation of chlorine in tissues, A., ii, 716.

Picon, M., the action of sodammonium hexamethylenetetramine, methyldiaminomethane, and ethylideneethylamine, A., i, 1123.

Picon, M. See also P. Lebeau.

Pictet, Amé, and André Barbier, new synthesis of glycerol and a-glucoheptol, A., i, 4.

Pictet, Amé, and R. Jahn, a new depolymerisation product of starch, A., i, 987.

Pictet, Amé, and J. H. Ross, the polymerisation of lævoglucosan, A., i,

Pictet, Amé, and Henry Vernet, galactosan, A., i, 811.

Pieraerts, J., copal oil, a new fat of the Belgian Congo, A., i, 908.

Pierce, J. S. See Charles Shattuck Palmer.

Pierce, W. C. See G. Davis Buckner. Pieroh, Kurt. See Heinrich Schulze.

Pieroni, Antonio, iodo-derivatives of pyrrole, A., i, 763.

azoxyamides and diazo-compounds, A., i, 1071.

Pieroni, Antonio, and Aldo Moggi, constitution of certain polypyrroles, A., i, 766.

Piettre, Maurice, and Antony Vila, separation of the proteins of the serum, A., i, 63.

Piggot, Charles Snowden, manganese in the catalytic oxidation of ammonia, A., ii, 142.

Piggot, Charles Snowden. T. H. Rogers.

Piggott, Henry Alfred. See Christopher

Kelk Ingold. Pighini, Giacomo, chemical and biochemical investigations of the nervous

system under normal and pathological conditions. IX., A., i, 295.

Pilling, Norman B., vapour pressure of metallic calcium, A., ii, 291

Piña de Rubies, Santiago, and F. Gila Esteban, chemical and spectrochemical study of Spanish bismuth minerals, A., ii, 576.

Piña de Rubies, Santiago. See also B. Cabrera.

Pincass, Heinrich, attempts to prepare pure calcium cyanide, A., i, 532.

Pincussen, Ludwig, the fermentative properties of blood. V. Appearance of ferments in blood after various operations, A., i, 393.

behaviour of oxalic acid in the animal body, A., i, 403.

the influence of illumination on the metabolism of carbohydrates, A., i, 1088.

detection of urea; estimation of proteolytic ferments, A., ii, 884.

Pincussen, Ludwig, and J. L. Anagnostu, the influence of radiations on the hydrolysis of fats, A., i. 485.

Pincussen, Ludwig, and Aristomenis Floros, analysis of blood and urine. I., A., ii, 408.

Pincussen, Ludwig, and Kate Momferratos-Floros, influence of radiation on nucleic acid metabolism, A., i, 395.

analysis of blood and urine, A., ii, 408.

William, FredericPinkard. William Wardlaw, the action of sulphur on enprous chloride, T., 1300.

Pinkard, Frederic William. See also William Wardlaw.

Pinkus, S. See Paul Jacobsen.

Pirak, J., asymmetric synthesis, A., i, 810.

Pirani, Marcello von, and E. Lax, electrolytic migration of sodiumthrough glass, A., ii, 817.

Pittarelli, Emilio, source of error in tests for acetone, A., ii, 95.
Piutti, Arnaldo, and Enrico Boggio-

Lera, microchemical investigation of arsenic, A., ii, 584.

Piwowarsky, E., the constitution of strontium-lead alloys, A., ii, 644.

Pizarroso, A. See Obdulio Fernández. Plagge, H., comparative experiments on the inhibitive action of some chlorine derivatives of methane, ethane, and ethylene on fermentation, A., i, 93.

Planck, Max, absolute entropy and chemical constants, A., ii, 191.

free energy of gaseous molecules with any [possible] partition of velocities, A., ii, 689.

Plank, R., convertibility of chemical energy and the conception of affinity, A., ii, 357.

Plantefol. L., the toxicity of different nitrophenols towards Aspergillus niger, A., i, 204.

Platon, B. See Lennart Smith.
Plauson, Herman, and Georg von Tischenko, preparation of hydrocarbons, A., i, 818.

Plimmer, Robert Henry Aders, and John Lewis Rosedale, distribution of enzymes in the alimentary canal of the chicken, A., i, 485.

Plotnikow, Joh., photochemical studies. XIII. Photopolymerisation of vinyl chloride and the problem of caoutchouc, A., i, 419.

photochemical studies. XIV. Fundamental photochemical laws, A., ii, 248.

Pohl, Julius, the fate of methyl and isopropyl alcohols in the organism, A., i, 498.

Pohl, Robert. See B. Gudden. Pohland, Erich. See Erich Krause. Poirot, Gabriel. See Paul Fleury.

Poitevin, E. See H. V. Ellsworth. Polányi, Michael, theory of adsorption processes, A., ii, 479.

Röntgenographic determination crystal arrangement, A., ii, 623.

Polányi, Michael. See also M. Ettisch. Pollack, S. M. See James Bryant Conant.

Pollak, Friedrich. See Alfons Klemenc. Pollak, J., and Anna Spitzer, the estimation of the methyl group in methylated thiolbenzenes, A., ii, 789.

Pollak, Leo, influence of amino-acids and fatty acids on the regulation of the blood sugar, A., i, 483.

Polonovski, Michel, a new method of qualitative separation of the alkaline-earth metals, A., ii, 720.

approximate volumetric estimation of barium, A., ii, 720.

Polonovski, Michel, and C. Auguste, influence of sodium fluoride on the estimation of urea by the xanthydrol method, A., ii, 668.

Polonovski, Michel. See also C. Vallée. Polushkin, E. P., alloys of iron and uranium, A., ii, 152.

Pommereau, Hervé de, the reduction of ethyl benzoate and some other benzene derivatives by sodium and absolute alcohol, A., i, 338.

the reduction of some aromatic compounds by means of sodium and absolute alcohol, A., i, 825.

the reduction of ethyl a naphthylacetate and the a naphthylethanols by sodium and absolute alcohol, A., i, 828.

Pondal, Martiniano Leguigamón, fluorine in Spanish grapes, A., i, 1100.

Ponder, A. O. See Harold Brewer Hartley.

Ponder, Eric, hæmolytic action of sodium glycocholate, A., i, 292. the estimation of non-protein nitrogen

in blood, A., ii, 583. Ponndorf, Wolfgang, preparation of

coumarins, A., i, 565. Ponzio, Giacomo, dioximes. I. and III.,

A., i, 17, 1037.

cobalt compounds of a-oximino-ketones, A., i, 661.

Ponzio, Giacomo, and G. Ruggeri, dioximes. II., A., i, 627.

Pool, E. See Ch. Gränacher.

Pop, C. See Al. Ionescu.

Pope, Frank George. See Sri Krishna. Pope, John Clifford. See Francis Ernest Francis.

Pope, (Sir) William Jackson, and James Leonard Brierley Smith, the chlorinated dialkyl sulphides. T., 1166.

Pope, (Sir) William Jackson. See also John Edmund Guy Harris, Frederick George Mann, and William Hobson Mills.

Popov, Helene. See Wladimir Palladin. Popper, Egon. See Heinrich Wieland. Porcher, Ch., and A. Tapernoux, the

appearance of digestive enzymes during foetal life, A., i, 1088.

Porcher, M., the iodohydrin derived from allylbenzene and its transformations, A., i, 539.

Porcher, M. See also Marc Tiffeneau. Porges, Otto, a case of unusual acetonuria, A., i, 496.

Porritt, Benjamin Dawson. See Bernard Dunstan Wilkinson Luff.

Posnjak, Eugen, and Herbert Eugene Merwin, system Fe₂O₃-SO₃-H₂O, A., ii, 772.

Posnjak, Eugen, and Ralph W. G. Wyckoff, crystal structures of alkali haioids, A., ii, 499.

Posnjak, Eugen. See also Ralph W. G. Wyckoff.

Potter, Ralph S. See George C. Bailey. Poucholle, A., tempering, A., ii, 299.

Pound, James Robert, properties of mixtures of ethyl ether, sulphuric acid, and water, T., 941.

Povarnin, G., and P. Tichomirov, molecular compounds of diketopiperazine and phenols, A., i, 1185.

Power, Frederick Belding, and Victor K. Chesnut, the odorous constituents of apples, A., i, 96.

the occurrence of methyl anthranilate in grape juice, A., i, 97.

the odorous constituents of peaches, A., i, 99.

Powers, Edwin Booth, physiology of the respiration of fishes in relation to the hydrogen-ion concentration of the medium, A., i, 286.

Powers, Edwin Booth. See also John Addyman Gardner.

Prandtl, Wilhelm, density and molecular volume of the oxides of lanthanum, praseodymium, neodymium, samarium, and europium, A., ii, 379.

Prandtl, Wilhelm, and Joseph Lösch, the separation of the rare earths by basic precipitation. III. The quantitative separation of cerium from the other earths, A., ii, 770.

Wilhelm, and Johanna Prandtl, Rauchenberger, the separation of the rare earths by basic precipitation,

A., ii, 298, 769. Pratt, David Doig, and Robert Robinson, a synthesis of pyrylium salts of antho-cyanidin type, T., 1577. Prausnitz, P. H., some electro-osmotic

experiments with de Haen's membrane filters, A., ii, 114.

Prax, J., olive oils and the Villavecchia reaction, A., ii, 595.

Prell, Ernst. See Rudolf Pummerer.

Prell, G. See Ferdinand Henrich.
Preti, M. See F. Traetta-Mosca.
Price, (Miss) M. C. See (Miss) Mabel

Harriet Norris.
Price, William John. See Arthur Robert Ling.

Prideaux, Edmund Brydges Rudhall. and H. W. Hewis, the anodic corrosion of bismuth; bismuth compounds, A., ii, 511.

Prigge, C. See Georg Schroeter.

Prigge, Richard, the error in estimating chloride by Bang's micro-method, A., ii, 715.

Pring, John Norman, and E. O. Ransome, reaction between cathodic hydrogen and nitrogen at high pressures, A., ii, 639.

Pringsheim, Hans,and Alexander Aronowsky, inulin. III., A., i, 635.

Pringsheim, and Diamandi Hans, Dernikos, chemistry of starch. VI. polyamyloses, A., i, 632.

Pringsheim, Hans, and Kurt Goldstein, VII. Relationchemistry of starch. ship of the a- and B-polyamyloses to the content and integument substance of the starch granule, A., i, 633.

Pringsheim, Hans, and Max Lassmann, inulin. II. Inulin and glycogen, A., i, 634.

Pringsheim, Hans, and Karl Otto Müller, the physiology of the "polyamyloses." I., A., i, 410.

amyloses." I., A., i, 410. Pringsheim, Hans, and Walter Persch, chemistry of starch. IV. The methylation of polyamyloses, A., i, 113.

chemistry of starch. V. Methyl and acetyl products of the "polyamyloses," A., i, 632.

Pringsheim, Hans, and Karl Schmalz, tetralævoglucosan and tetraglucosan, A., i, 1118.

Pringsheim, Peter, divergence from Stokes's law during the excitation of the fluorescence of iodine vapour, A., ii, 178.

difference between the absorption spectrum and the complete fluorescence spectrum of iodine vapour indicated by Lenz's theory, A., ii,

disturbance of the power of fluorescing of fluorescent solutions by light, and the photochemical equivalent law, A., ii, 602.

Prins, Ada, the conditions for the maximum precipitation of an amphoteric electrolyte, A., ii, 77.

Prins, H.J., acceleration of the solubility of metals in acids by reducible compounds, A., ii, 488.

the detection of nitro-compounds, A., ii, 877.

Pritzker, J., and R. Jungkunz, hazelnut oil and the estimation of arachidic acid, A., i, 208.

Procopiù, Stéfan, electromotive force produced by the relative displacement of an electrode and an electrolyte, A., ii, 112. the variations of the spectrum of the

mercury arc with the conditions of

emission, A., ii, 600.

Proskouriakoff, A. See George W. Raiziss.

Proud, Kathleen. See James Frederick Spencer.

Prud'homme, Maurice, some relationships between the critical temperature and the melting and boiling points, A., ii, 349.

the corresponding states; the halogenated derivatives of benzene, A., ii,

426.

Pryde, John. See Alexander Killen Macbeth.

Przibram, Karl. See Stefan Meyer.

Pschenicyn, N. K. See Leo Alexandrovitsch Tschugaev.

Pucher, George W., uric acid. Examination of the variables in the Folin and Wu uric acid method. A modification of the Folin and Wu uric acid method, A., ii, 668.

Pucher, George, and William Maurice Dehn, solubilities in mixtures of two

solvents, A., ii, 126.

Pucher, George W., and Treat Baldwin Johnson, the utilisation of ethyl γ-diethoxyacetoacetate for the synthesis of derivatives of glyoxaline; an attempt to synthesise histamine by a new method, A., i, 549.

Pummerer, Rudolf, and Joseph Binapfl, the behaviour of azo-compounds and their salts with aromatic hydrocarbons and aluminium chloride, A.,

Pummerer, Rudolf, Josef Binapfi, Karl Bittner, and Karl Schuegraf, the reaction between azobenzene hydrochloride and aromatic hydrocarbons. II., A., i, 1196.

Pummerer, Rudolf, Dona Melamed, and HansPuttfarcken, oxidation phenols. VII. Dehydrogenation of p-cresol, A., i, 1161.

Pummerer, Rudolf, and Ernst Prell, the

addition of henzene to p-benzoquinone,

A., i, 1164. Purdum, R. B. See Graham Edgar.

Purdy, A. C. See Victor Grignard. Purdy, Helen A., and L. E. Walbum, the action of various metallic salts on hæmolysis, A., i, 1087.

Purgotti, Attilio, detection of magnesium in presence of manganese and phosphoric acid, A., ii, 85.

Purkayostha, R. M., and Nilratan Dhar, catalysis. XIII. Temperature coefficient of catalysed and noncatalysed reactions, A., ii, 362.
Purrmann, Ludwig. See Karl Freuden-

berg.

Pushin, NicolaiAntonovich, and Alexandra Fioletova, the equilibrium the system m-dinitrobenzeneurethane, T., 1822.

Pushin, Nicolai Antonovich, and Alexandra Alexandrovna Glagoleva, the equilibrium in systems composed of water and alcohols; methyl alcohol, pinacone, glycerol, and erythritol, T., 2813.

Putochin, N. J., the synthesis of pyrrolidine; reduction of pyrrole by catalytic hydrogenation, A., i, 1176.

the action of formaldehyde pyrrolidine and piperidine, A., i, 1176.

Puttfarcken. Hans.See Rudolf Pummerer.

Puxeddu, Ernesto, degrees of hydrolysis of alkali salts of hydroxyazo-compounds, A., i, 589.

Puxeddu, Ernesto, and MarcellaGennari, facts and theories in the constitution of the hydroxyazo-compounds, A., i, 587.

Puxeddu, Ernesto, and F. L. Vodret, velocity of reaction in the photochemical dissociation of ferric chloride, A., ii, 415.

Puyal, José, migration of a double

linking, A., i, 617. Puyal, José. See also Ernest Fourneau. Pyman, Frank Lee, orientation of the 1:4- and 1:5-dimethylglyoxalines; mode of fission of 5-aminoglyoxalines, T., 2616.

Pyman, Frank Lee, and Laurence Barnett Timmis, some arylazogly-

oxalines, A., i, 1197. Pyman, Frank Lee. See also Isidore Elkanah Balaban, and Louis Light.

Q.

Quaglia, A. See Carlo Sandonnini.

Quagliariello, G., chemical and physical properties of muscle and muscle extracts. VI. Muscle extract of

octopus, A., i, 608. the absorption spectra of methæmoglobin, and the alleged transformation of methæmoglobin into oxyhæmoglobin by the action of alkali, A., i, 883.

Quagliariello, G., effect of acids and alkalis on some chemical and physical properties of hæmoglobin, A., i, 1074.

Quarder, Bilfried, optical experiment demonstrating the Bragg method of crystal analysis, A., ii, 677.

Quick. Armand J., and Roger Adams, aliphatic arsinic acids, and aliphaticaromatic arsenious acids, A., i, 600.

Quisumbing, Francisco A., and Arthur W. Thomas, conditions affecting the quantitative estimation of reducing sugars by Fehling's solution; elimination of certain errors involved in current methods, A., ii, 92.

R.

Rabe, Paul, cinchona alkaloids. XXIII. Nomenclature, and isomerism phenomena, A., i, 360.

Rabe, Paul, Karl Kindler, and Otto Wagner, cinchona alkaloids. XXIV. Synthesis of vinyl-free quinatoxins and quinaketones, A., i, 361.

Rabinowitsch, Adolph I., anomalous

dissociation in aqueous solutions, A., ii, 186.

electrolytic dissociation of salts in concentrated solutions, and in the fused and solid states, A., ii, 187.

reversal of the molecular conductivity curve and abnormal dissociation, A., ii, 188.

negative viscosity, A., ii, 478.

conductivity of the latent image, A., ii, 605.

Rabinovitch, I. M., biochemistry of methyl alcohol poisoning, A., i, 963. Racke, Fritz. See Richard Willstätter.

Radde, Erich, derivatives of amino-

aldehydes, A., i, 1154. Radley, E. G. See See Arthur Francis Hallimond.

See Julius von Braun. Räth, Kurt.

Ragoss, A. See Erich Tiede.

Rahn, Otto, significance of surface tension phenomena for the dairy practice, A., ii, 478.

Rai, Raghunath. See Bawa Kartar Singh.

Raiford, Lemuel Charles, the nitration of halogenated phenols, A., i, 335.

Raiford, Lemuel Charles, and John R. Couture, the migration of acyl from nitrogen to oxygen, A., i, 931.

Raiteri, Luigi, optical properties of certain substances important in microchemistry, A., ii, 541.

Raith, Emmy. See Anton Skrabal.

Raiziss, George W., and A. C. Blatt, condensation products of arsphenamine [salvarsan] with aldebydes, A., i, 1079.

Raiziss, George W., and Joseph L. Gavron, the colloidal properties of arsphenamine [salvarsan] and allied products, A., i, 1202.

Raiziss, George W., and A. Proskouriakoff, organic nitro-compounds containing mercury, A., i, 604.

Raiziss, George W. See also J. F. Schamberg.

Rakshit, Jitendra Nath, morphine, codeine, and narcotine in Indian opium, A., ii, 96.

Rakuzin, Michael A., animal hides as amphoteric and colloidal protein; theory of dyeing, tanning, disin-fection, and preservation of leather and the physiological action of tanning material, A., i, 702.

a new fractionation method for proteins and their derivatives, A., i,

adsorption of proteins, ferments, toxins, and sera by aluminium hydroxide, A., i, 1199.

the relation between adsorption and electrolytic dissociation, A., ii, 619. recognition of proteins and derivatives by colour reactions, A., ii, 670.

Rakuzin, Michael A., and Tatjana Gönke, negative adsorption. II. Calculation of the amount of adsorbed solvent, A., ii, 821.

Ramadier, L. See Louis Duparc.
Raman, C. V., anisotropy of molecules, A., ii, 102.

molecular structure of amorphous solids, A., ii, 201.

molecular ælotropy in liquids, A., ii, 603.

the spectrum of neutral helium, A., ii, 803.

Ramann, Emil, and H. Sallinger, reactions in heterogeneous systems; the systems K_2CO_3 | $BaSO_4$ - K_2SO_4 | $BaCO_3$; K_2CO_3 | CaC_3O_4 - $K_2C_3O_4$ | $CaCO_3$ and K_2CrO_4 | $AgIO_3$ -

 $KIO_8 \mid AgCrO_4$, A., ii, 131.

(Mme) Pauline, Ramart-Lucas, molecular transposition accompanying the dehydration of aa-diphenyl-\$8dimethylpropan-a-ol, A., i, 34.

Ramart-Lucas, (Mme) Pauline, and G. Albesco, two aaß-substituted propiophenones and their products of decomposition by sodamide, A., i, 662.

Ramart-Lucas, (Mme) Pauline, See also Albin Haller.

Ramm, Marie. See Friedrich Kehrmann.

See Max Bodenstein. Ramstetter.

Randall, H. M., Walter F. Colby, and R. F. Paton, temperature shift in near ultra-red bands, A., ii, 805.

Randles, F. S., and Arthur Knudson, estimation of lipoid phosphoric acid ("lecithin") in blood by application of Bell and Doisy's method for phosphorus, A., ii, 719.

Rankine, Alexander Oliver, structure of some gaseous molecules of which hydrogen is a constituent, A., ii, 635.

the molecular structure of carbon oxysulphide and carbon disulphide,

A., ii, 704.

Rankine, Alexander Oliver, and Clarence Joseph Smith, viscous properties and molecular dimensions of silicane, A., ii, 709.

Ransome, E. O. See John Norman Pring.

Raper, Henry Stanley. See Herbert Davenport Kay.

Rapport, David. See H. V. Atkinson. Rast, Karl, a micro-method for the determination of molecular weight in a melting-point apparatus, A., ii, 421.

Rastelli, G., derivatives of isoeugenol, A., i, 1010.

Rastelli, G. See also Riccardo Ciusa.

Rathert, H. See Arthur Kötz. Rathery, F. See Alexandre Desgrez.

Rathsam, G. See Hermann Staudinger.

Rathsburg, Hans, mercury fulminate, A., i, 116. reductions with titanium trichloride,

A., i, 242.

Rau, Madyar Gopal, and John Lionel Simonsen, oils and fats from the seeds of Indian forest trees, A., i, 1100.

Rau, Madyar Gopal. See also John Lionel Simonsen.

Rauch, Hans, estimation of the carbon dioxide content of air, with special reference to the "aeronom," A., ii, 316.

Rauchenberger, Johanna. See Wilhelm Prandtl.

Ravenna, Ciro, constitution of the dipeptides of aspartic acid, A., i, 180.

Ravenna, Ciro. See also Giacomo Luigi Ciamician.

Rawling, Sidney Owen, electric heating and controlling apparatus for a small thermostat, A., ii, 612.

Rawling, Sidney Owen, and Walter Clark, the isoelectric condition of gelatin, T., 2830.

Rây, (Sir) Prafulla Chandra, triethylene tri- and tetra-sulphides. II., T., 1279.

Rây, (Sir) Prafulla Chandra, and Radhakishen Das, chloropicrin as a reagent for the diagnosis of mercaptans and potential mercaptans, T. 323.

Rây, Priyadaranjan, and Pulin Vihari Sarkar, formation and dissociation of polyhalogen compounds of hydrogen in aqueous solution, T., 1449.

Ray, Rames Chandra, the potassium salt of hexahydrodioxydiboron, T.,

heat of crystallisation of quartz, A., ii, 685.

Raymond, E., the fatty acids of colza oil, A., i, 798.

Rayner, Archibald, composition of the residue on distillation of crude glycerol, A., i, 711.

Read, Hugh Norman. See Gilbert Thomas Morgan.

Read, John, and Eric Hurst, the conversion of allyl alcohol to glyceryl chloro- and bromo-hydrins, T.,

the action of bromine water on indene, T., 2550.

Read, John, and Henry George Smith, piperitone. II. Benzylidene-dl-piperitone, T., 574. peritone. IV. The interaction of

piperitone. dl-piperitone and semicarbazide, and the isolation of pure dl-piperitone, T., 1863.

Read, John, Henry George Smith, and (Miss) Marie Bentivoglio, piperitone. III. The oximes of dl-piperitone, T., 582.

Read, J. W., practical significance of the organic carbon; nitrogen ratio in

soils, A., i, 416. Read, J. W., and R. H. Ridgell, use of the conventional carbon factor in estimating soil organic matter, A., ii, 540.

Read, T. A. See David Avery.

Read, William T., hydantoins; synthesis of the soporific 4-phenyl-4ethylhydantoin [nirvanol], A., i, 954.

Reaubourg, G. See C. Pépin. Rebello-Alves, S. See Alberico Benedicenti.

Rebmann, Adolf. See Emil Baur.

Rechenberg, Carl von, intersecting vapour pressure curves and deductions therefrom, A., ii, 120.

vaporisation of solutions of liquid pairs possessing intersecting vapour pressure curves, A., ii, 120.

Rechenberg, Carl von, and W. von Rechenberg, formation of additive products between cresols on the one hand and ethyl ether, ethyl alcohol, acetone, benzene, etc., on the other, **A**., i, 932.

Rechenberg, W. von. See Carl von Rechenberg.

Reclaire, A., analysis of acetic anhydride, A., ii, 532.

Reclaire, A. See also Anne Willem

Karel de Jong.

Recoura, A., new properties of the green chromium sulphate, A., ii, 508.

Reddelien, Gustav, the mutual replacement of amine residues by anils, A., i, 145.

Reddelien, Gustav, and Hildegard Danilof fission of anils, A., i, 147.

Redfern, Gladys M., absorption of ions by the roots of living plants. I. Absorption of the ions of calcium chloride by pea and maize, A., i, 614.

Redwitz, E. von. See Eduard Grafe.

Reeder, J. C. See J. S. Jones.

Reedy, J. H., silver bromate, A., ii, 56. precipitation of arsenic sulphide from arsenates, A., ii, 225.

See Gilbert Reeves, Harry Gordon. Thomas Morgan.

Regenbogen, $(\overline{M}llc)$ A. See Nicolaas Schoorl.

Réglade, Antoine. See Paul Nicolardot. Reglin, Werner. See Arthur Rosenheim.

Reich, René. See André Job.

Reichel, Heinrich, water and ionic distribution in the organism A., i, 485.

Reichenstein, David, and F. Klement, an electrolytic current intensification effect, a new electrolytic displacement effect, and the connexion between electrolysis and the emission of electrons in a vacuum. II., A., ii, 112.

Reichenstein, David, and M. Rothschild, an electrolytic current intensification effect, a new electrolytic displacement effect, and the connexion between electrolysis and the emission of electrons in a vacuum. III., A., ii, 736.

Ebenezer Emmet, Colin M. Reid, Mackall, and George E. Miller, derivatives of anthraquinone, aliphatic thioethers, dithioethers, and thioether sulphonic acids, A., i, 154.

Reid, Ebenezer Emmet. See also Neil E. Gordon, C. H. Milligan, and Raphael Rosen.

Reid, Robert Douglas. See Malcolm Percival Applebey.

Reif, G. See Balthasar Pfyl.

Reihlen, Hans, the auxiliary valency of

the hydroxyl group. I., A., i, 1146. Reihlen, Hans, and Adolf Sapper, the auxiliary valency of the hydroxyl group; the complex salts of substituted pyrocatechol, A., i, 1147.

Reilly, (Miss) Amy Ada Beatrice. John Norman Collie.

Reindel, Fritz. See Heinrich Wieland. Reinders, Willem, and P. van Groningen, equilibria in the system Fe-C-O; equilibrium Fe#_martensiteferrous oxide-gas, A., ii, 153.

Reinfurth, Elsa. See Carl Neuberg. Reinhard, H. F. See M. G. Mellon. Reinicke, Dora. See Peter Rona.

Reinger, Erich, sativic acid, A., i, 623. Reis, A., and L. Zimmermann, hardness of solid substances and its relationship to chemical constitution, A., ii, 745.

Reis, H. See Ch. Gränacher. Reis, V. van der. See Rudolf Cobet. Reissaus, G. G. See Erich Krause.

Reissert, Arnold, a new class of vat dyes containing sulphur and nitrogen, A., i, 583.

Reist, Svend Hubert, estimation of sugar in small quantities of blood by the Pavy-Sahli method, A., ii, 323.

Reitstötter, Josef. See Arne Westgren. Remy, Heinrich, the alkali-ruthenium double sulphites, A., ii, 857.

Renaud, E. See A. Astruc.

Rendall, Arthur Geoffrey, and (Miss) Martha Annie Whiteley, the oxime of mesoxamide (isonitrosomalonamide) and some allied compounds. The ethers of isonitrosomalonanilide, isonitrosomalondimethylamide, and isonitrosomalondibenzylamide, Т., 2110.

Rengade, Etienne, the redissolution of a salt during the isothermal evaporation of a solution, A., ii, 31.

Renn, Konrad. See Stefan Goldschmidt. Renoux, M., identification of traces of true albumin in urine; separation of ψ -albumins, A., ii, 797.

Renshaw, Arnold. See Thomas H. Fairbrother.

Renshaw, Roemer Rex, and Nellie M. Naylor, dyes containing the furan ring, A., i, 566.

Renz, Carl, light reactions of the oxides

of titanium, cerium, and the earth acids, A., ii, 61.

photochemistry of thallous chloride. II., A., ii, 66.

the rare earths in the periodic system, A., ii, 758.

Report of the Council, T., 722. Retze, Ewald. See Karl Fleischer.

Reuss, A., estimation of nitrates in drinking water by Mayrhofer's method, A., ii, 454.

Reverdin, Frederic, and H.-P. André Roethlisberger, nitro-derivatives of p-phenetidine, A., i, 537.

Reychler, Albert, atomic weights and frequencies, A., ii, 279.

Rhind, Donald, and Francis Edward Smith, tannase, A., ii, 407.

Rhode, Heinrich, solubility, capillary activity, and hemolytic activity of terpene derivatives, A., i, 964. hæmolysis by morphine and homo-

logues, A., i, 1088. Rhodes, F. H., and A. L. Markley, freezing-point diagram of the system

phenol-water, A., i, 135. Rhyn, A. J. van. See Erich Ebler.

Ribaud, G., spectrum of bromine vapour; Zeeman effect, A., ii, 3.

Ribot, A. See Ch. Achard.

Rice, Francis E., and Toratoro Hanzawa, estimation of peroxydase in milk, A., ii, 407.

Rich, M. N. See John W. Marden. Richards, Theodore William, magnitude

of atoms, A., ii, 42.

Richards, Theodore William, Edward P. Bartlett, and James H. Hodges, compressibility of benzene, liquid and

solid, A., ii, 28.
Richards, Theodore William, and James
Bryant Conant, electrochemical behaviour of liquid sodium amalgams,

A., ii, 340.

Richards, Theodore William, and Theodore Dunham, jun., effect of changing the hydrogen-ion concentration on the potential of the zinc electrode, A., ii, 418.

Richards, Theodore William, and William Buell Meldrum, existence of tetra-hydrated sodium sulphate in mixed crystals with sodium chromate, A., ii, 54.

Richards, Theodore William, and Allan W. Rowe, heats of neutralisation of potassium, sodium, and lithium hydroxides with hydrochloric, hydrobromic, hydriodic, and nitric acids at various dilutions, A., ii, 425.

Richards, Theodore William, and Charles P. Smyth, solid thallium amalgams and the electrode potential of pure

thallium, A., ii, 341.

Richards, Theodore William, and Setsuro Tamaru, heat of solution of cadmium in hydrochloric acid, A., ii, 475.

Richards, Theodore William, and Thorbergur Thorvaldson, heat of solution of zinc in hydrochloric acid, A., ii, 475.

Richardson, Owen Willans, and Charles Blizard Bazzoni, excitation of soft characteristic X-rays, A., ii, 14.

Richaud, A., the comparative bloodpressure raising power of racemic and lævo-adrenaline, A., i, 891.

the action of the digestive juices on β-benzyl-d-glucoside, A., i, 1094.

the toxicity of β -benzylglucoside obtained by biochemical synthesis, A., i, 1094.

Richmond, Henry Droop, and E. H. England, the sulphuric acid reaction for liver oil, A., ii, 792.

Richter, Friedrich. See Erich Tiede.

Richter, Rudolf. See Alois Zinke. Richter-Quittner, M., the importance of imbibition for some biochemical problems, A., ii, 204. chemical blood analysis.

III. The importance of the ultra-filtration method for the analysis of blood, A., ii, 240.

blood analysis. IV. Ashing methods, A., ii, 407.

Richter-Quittner, M., and H. Hoenlinger, estimation of non-protein nitrogen by means of ultra-filtration, A., ii, 717.

Richter-Quittner, M. See also Wilhelm Falta.

Richtmyer, F. K., the laws of absorption of X-rays, A., ii, 105.

mass-absorption coefficients as a function of wave-length above and below the K X-ray limit of the absorber, A., ii, 804.

the evidence regarding the so-called "J" radiation in the characteristic X-ray spectra of the elements, A., ii, 804.

Rideal, Eric Keightley, the hydrogenation of ethylene in contact with nickel, T., 309.

Rideal, Eric Keightley, and William Thomas, the autoracemisation of potassium chromioxalate, T., 196. adsorption and catalysis in Fuller's earth, T., 2119.

Rideal, Eric Keightley. See also Charles George Lewis Wolf.

Ridgell, R. H. See J. W. Read.

Ridgway, Leslie Randal. See Frederick Challenger.

Rie, Gertrud. See Ernst Philippi. Riebensahm, E. See Georg Schroeter.

Riedel, J. D., Akt.-Ges., preparation of derivatives of cholic acid, A., i, **55**3.

preparation of bile acids, A., i, 554. preparation of ethers of p-hydroxyphenylcarbamide, A., i, 579.

Riedel, J. D., Akt.-Ges., preparation of hexamethylenetetramine derivatives, A., i, 991.

preparation of additive products of hexamethylenetetramine with esters of monohalogen fatty acids, A., i, 991.

preparation of an unsaturated bile acid, A., i, 1160.

Riemer, Heinrich. See Robert Kremann.

Riesenfeld, Ernst Hermann, and G. W. Feld, polythionic acids and polythionates, A., ii, 45.

thionates, A., ii, 45.
Riesenfeld, Ernst Hermann, and R.
Klement, the constitution of Erdmann's salt and its derivatives, A., ii, 853.

Riesenfeld, Ernst Hermann, and G. M. Schwab, ozone, A., ii, 637.

physical constants of ozone, A., ii, 761.

Riesser, Otto, the physiology of creatine, A., i, 791.

Riesser, Otto, and S. M. Neuschlosz, mechanism of the contraction of striated muscle produced by poisons. V. The action of specific muscle poisons on lifeless colloids, A., i, 1212.

Riffart, Hans, the triketohydrindene (ninhydrin) reaction as a quantitative colorimetric method for the estimation of amino-acid nitrogen, A., ii, 718.

Riffert, Elli. See Karl Schaum.

Riggert, K. See M. Volmer.

Riiber, Claus Nissen, mutarotation. I., A., ii, 807.

Riley, George Clifford. See Edward Hope.

Rilliet, Auguste, 6-aminoveratraldehyde and its derivatives, A., i, 839.

Bimbach, Eberhard, and P. Ley, acidifying action of hydroxy-organic compounds on boric acid and molybdic acid, A., ii, 342.

Rindl, M., masurra tallow, a product of the nuts of *Trichilia emetica*, A., i, 1102.

Ringer, Wilhelm Eduard, the influence of reaction on the action of trypsin. I., A., i, 282.

I., A., i, 282.

Rinne, Friedrich, space formulæ, A., ii, 368.

Riou, Paul, the velocity of absorption of carbon dioxide by alkaline solutions, A., ii, 433, 487.

the rate of absorption of carbon dioxide by ammoniacal solutions, A. ii. 742.

A., ii, 742.

Ripert, Jean, the biology of the alkaloids of belladonna, A., i, 96.

Ripper, Kurt. See W. J. Minaeff.

Risseghem, (Mlle) Hortensevan, synthesis of trimethylethylmethane [ββ-dimethylbutane], A., i, 313.

γ-methyl-Δγ-pentene, A., i, 909.

Risseghem, (Mile) Hortense van. See also Georges Chavanne.

Rivalland, Ch. See Philippe Malvezin. Rivett, Albert Cherbury David, the quaternary system, ammonium chloride—sodium sulphate—ammonium sulphate—sodium chloride—water, T., 379.

Rivière. See Clément.

Roaf, Herbert Eldon, urochrome as a derivative of chlorophyll, A., i, 401.

Robert, E. See Richard Stoermer.
Roberts, Lathrop E. See William
Droper Harkins.

Roberts, Oswald Digby, and Harold Thomas Islip, the constants of Indian beeswax, A., ii, 534.

Robertson, John K., the electrodeless discharge in certain vapours, A., ii, 609.

Robertson, John McGregor. See George Gerald Henderson.

Robin, A., and A. Bournigault, cancerous anæmia, A., i, 497.

Robin, Paul, action of nitrogen iodide and of cyanogen iodide on benzamidine, A., i, 36.

Robinson, Charles S., hydrogen-ion concentration of human fæces, A., i, 899.

the composition and preparation of a neutral solution of ammonium citrate, A., ii, 84.

Robinson, Charles S., and Selma L. Bandemar, the analysis of solutions of ammonium citrate, A., ii, 460.

Robinson, Charles S., O. B. Winter, and E. J. Miller, availability of organic nitrogenous compounds, A., i, 212.

Robinson, Guy C., the acetone and butyl alcohol fermentation of various carbohydrates, A., i, 971.

Robinson, Gilbert Wooding, mechanical analysis of humus soils, A., ii, 888.

a new method for the mechanical analysis of soils and other suspensions, A., ii, 888.

Robinson, Lilly. See Ernst Philippi.
Robinson, Robert, the atomic vibrations in the molecules of benzenoid

substances, A., i, 533.

Robinson, Robert. See also James Wilson Armit, Herbert Grace Crabtree, Herbert Greene, William Ogilvo Kermack, Alexander Killen Macbeth, Hidejiro Nishikawa, David Diyo Pratt, and James Scott. Robinson, R. H., and D. E. Bullis, acid soils. III. The influence of calcium carbonate, calcium oxide, and calcium sulphate on the soluble soil nutrients of acid soils, A., i, 976.

Robinson, William O., absorption of water by soil colloids, A., i, 1228.

Robison, Robert, the value of gelatin in relation to the nitrogen requirements of man, A., i, 488.

distribution of the nitrogenous constituents of the urine on low nitrogen diets, A., i, 495.
the estimation of total sulphur in urine, A., ii, 389.

Robles, B. de Vries, the blood calcium content in normal children and in

tetany. I., A., i, 192.

Rockefeller Institute Medical for Research, preparation of aromatic aminoarsinic acids, A., i, 961.

preparation of **a**romatic arsenocompounds, A., i, 962.

Rodier, E. See Jules Aloy.

Rodillon, Georges, a source of error in testing urine for dextrose with o-nitrophenylpropiolic acid, A., ii,

detection of urobilin in urine, A., ii, 888.

Rodriguez Mourelo, José, thermotropy, **A., i**i, 604.

Röckemann, W., [fate of tetrahydronaphthalene in the organism], A., i, **4**99.

Röder, Hans. See Ernst Späth.

Röhm and Haas, preparation of ethylene cyanohydrin [8-hydroxypropionitrile], A., i, 531.

Röhm, Otto, a new iron salt, A., ii, 648.

Röhm, R. See H. Kesseler.

Rørdam, H. N. K., influence of substitution in the ortho-, meta-, and parapositions on the absolute affinity of benzoic acid. I., A., i. 338.

Rösler, Wilhelm. See Robert Kremann. H.-P. Roethlisberger, André. Frederic Reverdin.

Rogers, E. C. See John Bernard Ekeley.

Rogers, J. See E. M. Black.

Rogers, T. H., Charles Snowden Piggot, W. H. Bahlke, and J. M. Jennings, catalytic oxidation of carbon monoxide, A., ii, 136.

Rogozinski, F., biochemistry of phosphorus, A., i, 1226.

Rojahn, C. A., poly-ethers of trimethylene glycol, A., i, 103.

preparation of β-chloro- and β-bromopropionic acids from trimethylene glycol, A., i, 105.

Rojahn, C. A., some ketones of the pyrazole series, A., i, 373.

3-chloro-1-alkylpyrazoles and 1-alkylpyrazol-3-on+, A., i, 1183.

Rojahn, C. A. See also Carl Mannich. Rojdestwensky, A., properties and preparation of Dutch East Indies sandal

wood oil, A., ii, 792.
Rolf, Ida P. See Phabus A. Levene.
Rolla, Luigi [with Mario Frassineti, and Mario Bulli], corrosion of certain

aluminium alloys, A., ii, 379. Rolla, Luigi and L. Mazza, new differential method for the measurement of the conductivity of electrolytes, A., ii, 544

Rolt, William Joseph Woodgate. See Oscar Lisle Brady.

Roman, F. L. See Roger Adams. Romani, E., derivatives of benzthiazole, A., i, 466.

Romani, E. See also Giuseppe Bruni. Rombaut, Lawrence E, and Julius A. Nieuwland, catalytic synthesis of hexamethylenetetramine,

Romburgh, G. van, nitro-derivatives of alkylated benzidines, 275.

Romieu, Marc, and Fernand Obaton, comparative spectroscopic study of the green pigment of the Chetoptera and of the chlorophyll of the Ulva, A., i, 793.

Romijn, G., aluminium for the arsenic reaction, A., ii, 455.

Rona, Elizabeth, the ionium content of radium residues, A., i, 250.

Rona, Peter, Yrjo Airila, and A. Lasnitzki, toxicity; the combined action of quinine and of narcotics on invertase and on the action of arsenic compounds on maltase, and on amethylglucosidase, A., i, 959.

Rona, Peter, and Emerich Bach, toxicity. III. The action of m- and p-nitrophenols on invertase, A., i, 65.

Rona, Peter, and Ernst Bloch, toxicity. I. The action of quinine on invertase, A., i, 65.

the fixation of quinine by red bloodcorpuscles and the distribution of quinine in blood, A. i, 290.

fixation of quinine by corpuscles and its action on cell respiration, A., i, 484.

Rona, Peter, and R. Pavlović, action of quinine and atoxyl on liver lipase, A., i**, 8**87.

Rona, Peter, and Dora Reinicke, toxicity. II. The action of quinine on serum-lipase, A., i, 67.

Rondoni, Pietro, origin of melanin from pyrrole. II. Action of organ extracts on pyrrole; the sepia of the cuttlefish, A., i, 64.

Rondou, Alb., the reaction of organomagnesium compounds on nitriles; action of magnesium methyl bromide on phenylacetonitrile, A., i, 934.

Rooke, Horace Samuel. See Gilbert

Thomas Morgan.

Root, Incie E. See Howard B. Lewis. Roschier, R. H. See Gustav Komppa.

Rose, William Cumming, the influence of food ingestion on endogenous purine metabolism. I. and II., A., i, 194.

Cyril.Rosebourne, See Alexander Findlay.

Rosedale, John Lewis, the amino-acids of flesh; the diamino-acid content of rabbit, chicken, ox, horse, sheep, and pig muscle, A., i, 492.

Rosedale, John Lewis. See also Robert

Henry Aders Plimmer.

Rosemann, R., the metabolism of calcium, A., i, 1210.

Rosen, Raphael, and Ebenezer Emmet Reid, sesqui-mustard gas or bis-βchloroethyl ether of ethylene dithioglycol, A., i, 420. Rosenberg, G. von.

See Friedrich

August Henglein.

Rosenberg, H., fatigue of alkali metal cells in the neighbourhood of the discharge potential and the influence of this on the results of photometric measurements, A., ii, 189.

Rosenberg, Max, blood sugar. I. A critical survey of the methods of estimation of blood sugar and of the "threshold" concept, A., i, 482.

blood sugar. II. Alimentary hyperglycemia under normal and pathological conditions, A., i, 789.

Rosenberg, J. O. See Paul Karrer. Rosenblatt, (Mme) M. See Gabriel Bertrand.

Rosenheim, Arthur, and Leonhard Krause, selenious acid and heteropolyselenites, A., ii, 47.

Rosenheim, Arthur, and Felix Leyser, iso- and heteropoly-acids. XVII. Polyborates in aqueous solution, A., ii., 50.

Rosenheim, Arthur, and Werner Reglin, highly basic lithium salts of weak inorganic acids, A., ii, 289.

Rosenheim, Arthur, and Gert Trewendt, complex uranyl hypophosphites, A., i, 650.

Rosenmann, Max, fibrinolysis. II., A., 596.

Rosenmund, Karl W., certain deriva-tives of arylated cinchonic acids, A., i, 51.

reduction of acid chlorides to aldehydes by means of nickel catalysts, A., i, 939.

Rosenmund, Karl W., and E. Pfannkuch, gallaldehyde and its derivatives, A., i, 1030.

Rosenmund, Karl W., and Zetzsche, the influencing of catalysts and specifically active catalysts, A., ii, 41, 834.

Rosenmund, Karl W., Fritz Zetzsche, and Fr. Enderlin, preparation of aldehydes from acid chlorides. V. (Dialdehydes. II.) Synthesis of decanedial, A., i, 431.

Rosenmund, Karl W., Fritz Zetzsche, and Chr. Flütsch, the preparation of aldehydes from acid chlorides. IV.

Dialdehydes. I., A., i. 39. Rosenthal, Felix, and Klothilde Meier, the types of reaction of the bile pigments and the quantitative relation of bilirubin to cholesterol in the blood during different forms of jaundice, A., i, 198.

Rosenthaler, Leopold, the hydrocyanic acid question. VII. Cornus san-

guinea, A., i, 412.

asymmetric syntheses by means of enzyme action. IV., A., i, 480.

 σ -emulsin (oxynitrilese), δ -emulsin (oxynitrilase), and carboligase, A., i, 600.

the hydrocyanic acid question. VIII. Plants containing hydrocyanic acid and saponin. IX. Hydrocyanic acid content of cherry-laurel leaves infected by fungi. X. Influence of lesions on the hydrocyanic acid content of cherry-laurel leaves, A., i, 614.

iodic acid as a microchemical reagent for the detection of organic bases,

A., ii, 327.

estimation of arsenic acid, A., ii, 584. detection and estimation of oxalic acid and its use in standardising iodine and silver solutions, A., ii. 594.

Roser, P. See Alfred Heiduschka.

Ross, Albert. See Wilhelm Schneider. Ross, Harry P. See Clarence E. May. Ross, J. H. See Amé Pictet.

Rossi, G., colloidal trimercuriacetanilide acetate, A., i, 605.

physico-chemical investigation colloidal sulphur, A., ii, 485.

Rossi, G. See also Alessandro Bernardi. Rost, E., zinc in the human and animal organism, A., i, 87.

Rothenberger, EmilSee FranzFichter.

Rother, Julius, the problem of nuclein metabolism. II. The influence of human fæces on yeast-nucleic acid, A., i, 292.

Rothschild, M. See David Reichinstein.

Roure-Bertrand Fils, essential oils, A., i, 845, 846, 847.

two Indo-Chinese oils, A., i, 846.

Rouzaud and Thiéry, relation between the viscosity of blood and the ratio of uric acid in serum to that in whole blood, A., i, 394.

relation between viscosity and the ratio of cholesterol in serum to that in whole blood, A., i, 394.

Rowe, Allan W. See Theodore William Richards.

Rowe, Frederick Maurice, and John

Stanley Herbert Davies, studies in the dihydronaphthalene series. III. The oxidation and bromination of 5:8dihydro-α naphthylamine, T., 1000.

Roxas, Carla Ruiz de. See Franz Faltis. Rov. Gustave. See Friedrich Kehrmann. Royer, J., estimation of the chlorometric degree of bleaching chlorides, A., ii,

Royer, L., the inversion of the rotatory power in anisotropic liquids, A., ii, 415. Royer, L. See also Georges Friedel.

Rubricius, H., estimation of nickel in steels, A., ii, 163.

Rudnick, Paul, preparation of chloro-platinic acid by means of hydrogen

peroxide, A., ii, 303. Rudolfs, W. See André Helbronner. Rüdy, R. See Charles Eugène Guye. Rucha, Amin. See W. Biedermann.

Ruff, Otto, reactions on metallic surfaces, A., ii, 363.

Ruff, Otto, and Hellmuth Hartmann, the absorption of nitrogen by calcium and its alloys, A., ii, 377.

Otto, Ruff, Gerhard Schmidt, and Susanne Mugdan, high temperature investigations. XV. The vapour pressure of the alkali fluorides, A., ii, 818.

Ruff, Otto, and Fritz Thomas, the reduc-tion of tantalum pentachloride, A.,

Ruggeri, G. See Giacomo Ponzio.

Ruggli, Paul, and R. Ernest Meyer [with P. Hubert], stilbene-2:2'-dicarboxylic acid, A., i, 343.

Ruhemann, Siegfried, lignite producer

tar, A., i, 22.

Runge, C., a new band spectrum of oxygen, A., ii, 329.

Runnström, J., the action of some electrolytes and non-electrolytes on the velocity of sedimentation of the red blood-corpuscles of the horse, A., i, 289.

Rupe, Hans, trimethylcamphorylmethylammonium bromide, A., i, 666.

the influence of constitution on the rotatory power of optically active substances. XV. A new constant for calculating the curve of rotationdispersion, A., ii, 602.

Rupe, Hans, and P. Briellmann, iso-

campholic acid, A., i, 1017.

Rupe, Hans, and A. Jäggi, the influence of constitution on the rotatory power of optically active substances. Ketonic derivatives of 1:2:2:3-tetramethylcyclopentane and 1:2:2-trimethylcyclopentane-3-carboxylic acid, A., i, 840.

Rupe, Hans, and Hans Müller, the products of the reduction of hydroxymethyleneacetophenone [phenyl B-hydroxyvinyl ketone] and of α-hydroxymethylene-a-benzylacetone

 $[\beta$ -phenyl- α -hydroxy-methylene-ethyl

methyl ketone], A., i, 40.

Rupe, Hans, and H. Schmid, reduction products of hydroxymethylenecamphor. V. Coupling of hydroxylamine with methylenecamphor, A., i, 1041.

a case of total anomalous rotationdispersion, A., ii, 603.

Rupe, Hans, and R. Wittwer, condensation products of phenylhydroxylamine with hydroxymethylene compounds and carbinols. II. Hydroxymethylenedeoxybenzoin phenylhydroxylamine, A., i, 448.

condensation products of phenylhydroxylamine with hydroxymethylene compounds and carbinols. III. Diphenylbromomethane and phenylhydroxylamine, A., 449.

Ruppel, Wilhelm. See Emil Heuser.

Russell, Henry Norris, ionisation in the solar atmosphere, A., ii, 675.

Russell-Wells, Barbara, carrageen III. The con-(Chondrus crispus). stitution of the cell wall, A., i, 1223.

Rusznyák, Stefan, and Géza Hetényi, physico-chemical investigations on body-fluids. IV. The state of sugar in serum, A., i, 291.
Rutherford, (Sir) Ernest, artificial dis-

integration of the elements, T., 400.

Rutherford, (Sir) Ernest, and James Chadwick, the disintegration of elements by a particles, A., ii, 682.

Ruzicka, Leopold, and Jules Meyer, higher terpene compounds. II. Abietic acid, A., i, 547.

higher terpene compounds. V. Conversion of abietic acid into methyl-

retene, A., i, 829.

Ruzicka, Leopold, Jules Meyer, and M. Mingazzini, higher terpene compounds. III. The naphthalene hydrocarbons cadalene and eudalene; two aromatic fundamental compounds of the sesquiterpene series, A., i, 560. Ruzicka, Leopold, and M. Mingazzini,

higher terpene compounds. VI. The methylisopropylnaphthalenes

from cadalene, A., i, 1001.

Ruzicka, Leopold, and C. F. Seidel, higher terpene compounds. Synthesis of cadalene, A., i, 562. the 4-piperidone ring, A., i, 1057.

Ryschkewitsch, Eugen, behaviour of carbon at high temperatures, A., ii, 443.

8.

Saar, R., pycnometry, A., ii, 549. Sabalitschka, Th., aniline glucoside (glucose anilide), A., i, 247.

Sabalitschka, Th., and H. Schmidt, detection of antimony in analysis, A., ii, 531.

Sachs, Georg, and Ludwig Leopold, chlorination of p-iododimethylaniline, A., i, 821.

Sachs, W. See Paul Jacobsen.
Sage, C. Edward, analysis of acetic anhydride, A., ii, 593.

Saha, Haridas, and Kumud Nath Choudhury, capsularin, a glucoside from jute leaf, T., 1044.

Saha, Megh Nad, atomic radius and ionisation potential, A., ii, 278.

Saillard, E., composition of wild beetroots, A., i, 415.

St. John, Charles E., and Harold D. Babcock, wave-length of lines in the iron arc from grating and interferometer measurements, λ 3370-6750; A., ii, 4.

St. John, E. Q. See Joseph Samuel

Hepburn.

Sakaguchi, Kozo, Osamu Asakawa, and Toshitane Matsuyama, determination of the carbohydrate assimilative power of man, A., i, 699.

Sakao, Tokutaro, and Mitsuie Hirose,

colour of fluorites, A ii, 779.
Sakellarios, Euklid, the action of bromine on nitrophenol-sulphonic and -sulphocarboxylic acids, A., i, 1144.

Sala, C. See G. Charrier.

Salant, William, and Nathaniel Kleitman, the [physiological] action of mercury, A., i, 794. pharmacological studies on acetone,

A., i, 794.

toxicity of scatole, A., i, 794.

Salisbury, E.J., soil reaction and succession in relation to plant covering, A., i, 1104.

Salisbury, Henry M. See Earle T. Oakes.

Salkind. See Zalkind.

Salkowski, Ernst [Leopold], yeast gum and saccharase, A., i, 304.

xylan, A., i, 323.

the chemical nature of toxins and antitoxins, A., i, 1216. estimation of oxalic acid in urine, A.,

ii. 92. the estimation of the purine bases in

urine, A., ii, 405.

Salles, Edouard. See A. Zimmern. Sallinger, H. See Emil Ramann.

Sallmann, Richard. See Hans Eduard Fierz.

Salmon, Cyril Sebastian, the effect of electrolytes on the constitution of soap solutions, as deduced from electro-motive force, T., 711.

Salomon, Harry R. See Paul Karrer.
Salomon, T. See Henri Gault.

Salway, Arthur Henry, and Percy Noel Williams, the catalytic oxidation of saturated paraffin hydrocarbons and fatty acids, T., 1343.

Salway, Arthur Henry. See also L. V. Cocks.

Samdahl, B. See (Mlle) Ellen Gleditsch. Samec, Maximilian, and S. Ferjančič, plant colloids. XII. Action of formaldehyde on cellulose, A., i, 115.

Samec, Maximilian, and (Mlle) Anku Mayer, plant colloids. XIII. Synthetic amylo-phosphoric acids, A., i,

Samec, Maximilian, and V. Ssajevič, the composition of agar, A., i, 231.

Sammartino, Ubaldo, the chemistry of the lungs. I., A., i, 296.

the importance of the medium in the

study of catalase, A., i, 391. probable occurrence of proteinogenic amines in the thyroid, A., i, 966.

chemistry of the lungs; a new phosphosulphatide, A., i, 1089. a new constituent of the thyroid, A.,

i, 1212. Sammartino, Ubaldo. See also Herbert Elias.

Samson, G., changes in the blood after oral administration of sodium chloride, A., i, 82.

Samuelsen, Sigurd. See Emil Houser. Samuelsson, E., a-1-naphthylethylamine, A., i, 823.

Sanctis, G. de, and Q. Fiori, presence of aromatic hydroxy-acids in urine, A., i, 609.

Sandberg, Marta, the course of alcoholic fermentation in the presence of urea, A., i, 502.

Sandberg, Marta. See also Carl Neuberg.

Sander, Frank V. See John W. E. Glattfield.

Sando, Charles E., and H. H. Bartlett, the organic acids of Pyrus coronaria, L., Rhus glabra, L., and Acer saccha-

rum, Marsh, A., i, 100. Sandonnini, Carlo, behaviour of certain metals as catalysts. I., A., ii, 557.

Sandonnini, Carlo, and A. Quaglia, combination in detonating gas in presence of colloidal palladium solution, A., ii, 556.

Sandoz, Maurice. See Friedrich Kehrmann.

Sands, Lila. See Fred W. Upson.

Sanfourche, André, the analysis of liquid nitrogen peroxide, A., ii, 454.

the reactions between gaseous oxides of nitrogen and alkaline solutions, A., ii, 762.

Sanfourche, André, and A. M. Boutin, densities and retractive indices at 15° of mixtures of water, alcohol, and ether, A., i, 709.

Sanna, G. See Bernardo Oddo.

Sano, Minoru, phosphatides of fish sperm, A., i, 699. optical properties of sphingomyelin, A., i, 701.

Santesson, Carl Gustaf, the action of poisons on enzymic processes. VII. Metal catalysis and catalase action. The volumetric method for the estimation of catalase, A., i, 1077.

Santesson, Carl Gustaf. See G. J:son Blohm.

Sapper, Adolf. See Hans Reihlen.

Sarin, E., chemistry of the formation and ripening of honey, A., i, 197. influence of organic acids on the formation and ripening of sugarhoney, A., i, 197.
Sarkar, P. B., and Nilratan Dhar,

estimation of manganese by permanganate and investigation of some man-

ganites, A., ii, 398.

Sarkar, Pulin Vihari. See Priyada. ranjan Rây.

Sasaki, Nobuji, the velocity of formation of barium peroxide, A., ii, 273.

Sasaki, Nobuji, photochemical examination of the reaction between ferric

salts and iodides, A., ii, 772.

Sasaki, Takaoki, and Tokudji Hashimoto, benzoylation and benzylation of 2:5-diketopiperazine, A., i, 56.

Sasaki, Takaoki, and Jiro Kinose, the degradation of dl-a-naphthylalanine

by Bacillus proteus, A., i, 303.
Sasaki, Takaoki, and Ichiro Otsuka, the degradation of l-tryptophan by Bacillus proteus, A., i, 302.

Saslavsky, Joh. See Nikolai Schilov. Sato, Shinichi. See Christopher Kelk Ingold.

Sauer, E. See Alexander Gutbier.
Sauerwald, F., behaviour of carbon at high temperatures, A., ii, 443.

the increase in the size of grain of metallic bodies (not previously worked in the cold) formed from powdered material by pressure or sintering, A., ii, 746.

Saunders, Horace Leonard, the decomposition of ammonium nitrate by heat, T., 698.

Saunders, Kenneth Herbert, esters of the hydroxyalkylarylamines. I. Acid sulphuric esters of the simple mono-

hydroxyethylarylamines, T., 2667. Saunders, Kenneth Herbert. See also British Dyestuffs Corporation, Ltd.

Saurwein, K. See Karl von Auwers. Sauvageau, C., and Georges Denigès, the efflorescences of Rhodymenia palmata; presence of a xylan in the Floridean algæ, A., i, 507.

Saville, William Bristow. See Martin

Onslow Forster.

Sawyer, R. A., and A. L. Becker, the production of enhanced line spectra, A., ii, 242.

the exploded-wire spectrum of calcium, A., ii, 803.

Sayce, Leonard A., and A. Crawford, estimation of carbon dioxide in mineral carbonates, A., ii, 316.

Sayers, R. R., and W. P. Yant, the tannic acid method for the estimation of carbon monoxide in blood, A., ii,

Sazerac, Robert, and C. Levaditi, action of certain bismuth derivatives on syphilis, A., i, 89.

Sborgi, Umberto, and Lelio Ferri, borates. VI. The system (NH₄)₂O-B₂O₃-H₂O at 45° and at 90°, A., ii, 568.

borates; the system (NH₄)₂O-B₂O₃- H_2O ; temperature-concentration diagram, A., n, 764.

41

Sborgi, Umberto, and A. G. Nasini, reaction between boron nitride and various metallic oxides with production of nitric oxide, A., ii, 564.

Sborowsky, I. See M. Sborowsky. Sborowsky, M., and I. Sborowsky, a new accelerator for the destruction of organic matter in the Kjeldahl method for the estimation of nitrogen, A., ii, 783.

Scagliarini, Gino, and G. Torelli, terv-

alent copper, A., ii, 68.

catalytic action of copper in the oxidation of ammonia by means of persulphate, A., ii, 81.

Scalione, Charles C. See Arthur Becket. Lamb, and David R. Merrill.

Scarborough, Harold Archibald. Albert Eric Cashmore, and Hamilton McCombie.

Scatchard, George, speed of reaction in concentrated solutions and the mechanism of the inversion of sucrose, A., i, 230.

hydration of sucrose in water solution as calculated from vapour pressure measurements, A., i, 230.

Scelba, S. See Vincenzo Paolini.

Schaaf, Fritz. See August L. Bernoulli. Schaap, O. P. A. H., an apparatus for the extraction of theobromine and caffeine by means of boiling chloroform, A., ii, 797.

Schaarschmidt, Alfred, a new class of reduction products coloured 1-benzoylanthraquinones or of 2:3phthaloylbenzophenones, A., i, 355.

Schaarschmidt, Alfred, Maximilian Veidt, and Franz Schlosser, com-Maximilianpounds containing zinc derived from additive products of oxides of nitrogen and olefines, A., i, 645.

Schade, Heinrich, physicochemistry of colloidal and supersaturated solutions

of uric acid, A., i, 1192.

Schaefer, Clemens, the regularities of ultra-red spectra and the failure of the classical dispersion theory, A., ii, 727.

Schaefer, Clemens, and Martha Schubert, ultra-red reflection power of silica, A., ii, 179.

characteristic ultra-red frequencies of selenates and chromates, A., ii, 179. characteristic ultra-red frequencies of chlorates, bromates, and iodates,

A., ii, 180. ultra-red characteristic frequencies of

the silicates, A., ii, 727. Schaefer, R. See W. Eisenhardt.

Schaeppi, Hans, permeability of cells and tissues. VIII. The question of the distribution of hormones and drugs in the blood, A., i, 290.

Schaffer, A. J., Caspar Folkoff, and S. Bayne Jones, the presence of nucleic

acid in bacteria, A., i, 1095. Schaller, K. A., and W. Berndt, a new apparatus for exact gas analysis, A., ii, 862.

Schaller, Waldemar Theodore, sincosite, a new mineral, A., ii, 450.

Schamberg, J. F., George W. Raiziss, and J. A. Kolmer, sodium 2-nitro-4hydroxymercuriphenoxide,

Schames, Léon, general improvement of the equation of condition; special equation of condition for hydrogen, A., ii, 24.

Schaposchnikov, K., quanta of the ideal

monatomic gas, A., ii, 839. Scharf, Albert. See Sigmund Fränkel. Schaufelberger, P. See Ch. Gränacher. Schaum, Karl [with Elli Riffert], change of state of aggregation and poly-

morphism, A., ii, 264.
Schaum, Karl, and Theodor Marx, colour of photochlorides and colloidal

silver. Il., A., ii, 696.

Scheibe, Günter, and Gustav Schmidt, di- and tri-quinolylmethanes united by the pyridine nuclei. III. Symmetrical di-2-quinolyl ketone, A., i, 1190.

Scheibler, Helmut, and Paul Baumgarten, synthesis of N-alkylideneamino-acids and their conversion into N-alkylamino-acids by hydrogenation, A., i, 655.

Scheibler, Helmut, and Artur Fischer, synthetic experiments with ethenylcarbinols. I. Conversion of γ -methylbutinen-γ-ol into γ-methylbutinene, y-methylbutanolone, and its condensation products, A., i, 1108.

Scheibler, Helmut, and Heinrich Ziegner, metallic compounds of the enolic forms of carbonyl compounds and their application to syntheses. Synthesis of vinylideneglycol diethyl ether [keten-acetal]; explanation of the course of the reaction in the acetoacetic ester synthesis, 426.

Schellbach, Hans, arsenical poisoning and the distribution of arsenic over

the human body, A., i, 900. Schellenberg, R. See Alfred Wohl. Schelling, F. See Alexander Gutbier. Schempp, Erich, the behaviour of some

cyclic compounds in the human and animal organisms, A., i, 403.

Schenck, A. See Aladar Skita.

Schenck, Martin, the nitrogenous constituents of yeast, A., i, 305.

Schenck, Paul, the influence of the thyroid gland on metabolism, with special reference to heat-regulation, A., i, 491.

the physiological action of B-amino-4-ethylglyoxaline (histamine), A., i,

Schenck, Rudolf [with Albert Imker], germanium hydride, A., ii, 855.

Schenk, O. See Paul Friedländer.

Schenk, Paul, the influence of the thyroid on creatine-creatinine meta-

bolism, A., i, 1212.

Schenker, Robert, the lipase of Aspergillus niger (van Tiegh), A., i, 203.

Scherer, A., lung stones, A., i, 956. Scheringa, Klaas, the system camphoralcohol-water in relation to the titration of camphor-spirit, A., ii, 535.

Scherrer, Paul, and P. Stoll, determination of the Werner structure of inorganic compounds by means of X-rays, A., ii, 514. Schetelig, Jakob, thortveitite, a silicate

of scandium, A., ii, 306.

Scheucher, Hermann, invisible "mirrors" of arsenic, antimony, and bismuth, A., ii, 526.

Scheuing, Georg. See Heinrich Wieland. Schieber, W. See Alexander Gutbier.

Schiffrer, Anton. See Anton Skrabal. Schilov, E. A., action of silver sulphate in sulphuric acid solution on certain halogen derivatives, A., i, 913. negative valency and co-ordination

number, A., ii, 839. Schilov, E A. See also P. P. Budnikov. Schilov, Nikolai, Nad. Bulygina, Nik. Zerevtinov, Lidie Lepin, Olga Michajlova, Mich. Dubinin, Serg. Wosnessenski, Agness Ivanitzkaja, Lidie Orlova, and Joh. Saslavsky, adhesion forces in solutions. II. Adhesion series, A., ii, 350.

Schilov, Nikolai, and Lidie Lepin [with Marie Jantschak], partitioning of a substance between two solvents and the solution field of force, A., ii, 824.

Schilov, Nikolai, Lidie Lepin, Maric Jantschak, and Michael Dubinin, force of adhesion in solutions. III. Partition of substances between two solvents, A., ii, 626. Schilt, W. See Hermann Staudinger.

Schimmel & Co., estimation of chlorine in be**nz**aldehyde, A., ii, 78.

Schietz, A. B., electrolysis of aqueous solution of cerous salts, A., ii, 22.

Schlack, P. See William Küster. Schlatter, Gottfried, lactic acid fermentation of dextrose by peptone, A., i, 1096.

Schlayerbach. See William Küster. Schleede, Arthur. See Erich Tiede.

Schlenk, Wilhelm, and Hermann Mark, free pentaphenylethyl; the nature of the carbon linking, A., i, 1002. analogues of pentaphenylethyl, A., i, 1003.

Schlicht, A., bladder calculus of silicic acid, A., i, 496.

Schlichting, Otto. See Heinrich Wieland.

Schliewiensky, H., reduction of acid chlorides to aldehydes by means of nickel catalysts, A., i, 938. Schlosser, A. See P. Karrer.

Schlosser, Franz. See Alfred Schaarschmidt.

Schlubach, Hans Heinrich, and Fritz Ballauf, ammonium radicles. II. Tetraethylammonium. II. A., i,

ammonium radicles. III. Ammonium, A., ii, 55.

Schlubach, Hans Heinrich, and Eduard C. Goes, organo-metallic compounds. III. The mechanism of the Wurtz-Fittig synthesis, A., i, 1204.

Schlundt, Herman. See Allen G. Shenstone.

Schmajewski, Ch. See Friedrich Kehrmann.

Schmalz, Karl. See Hans Pringsheim. Schmid, E. See A. Magnus. Schmid, H. See Hans Rupe.

Schmidt, Carl L. A., preparation of

cystine, A., i, 992.
Schmidt, Carl L. A., and Guy W. Clark, fate of certain sulphur compounds when fed to the dog, A., i, 968.

Schmidt, Carl L. A., and G. F. Norman. eosin hæmolysis, A., i, 892.

Schmidt, Carl L. A. See also Max S. Dunn.

Schmidt, Erich, Walter Bartholomé, and Alfred Lübke, bromotriuitromethane. I., A., i, 826.

Schmidt, Erich, and Karl Braunsdorf, the natural proteins. I. Behaviour of chlorine dioxide towards organic substances, A., i, 781.

Schmidt, Erich, and Franz Duysen, incrustive substances of plants. II., A., i, 206.

Schmidt, Erich, and Heinrich Fischer, preparation of N-nitroso-derivatives of secondary amines, A., i, 822.

Schmidt, Erich, Richard Schumacher, Willy Bajen, and Adalbert Wagner, tetranitromethane. V. Tetranitromethane as nitrating agent. II., A., i, 733.

Schmidt, Erich, and Rudolf Wilkendorf, nitro- and amino-glycols. II., A., i, 314.

Schmidt, E. G. See W. H. Peterson. Schmidt, Friedrich, hexamethyleneimine and its behaviour on oxidation, A., i, 761.

action of sulphuryl azide on benzene, A., i, 777.

Schmidt, Friedrich. See also Theodor Curtius.

Schmidt, Gerhard. See Otto Ruff.

Schmidt, Gerhard Carl, vapour pressure of binary mixtures, A., ii, 119. ionisation brought about by quinine salts, A., ii, 182.

binary liquid mixtures, A., ii, 472.

Schmidt, Gerhard Carl, and Th. Lücke. diffusion of hydrogen through iron and platinum, A., ii, 198.

Schmidt, Gustav. See Günter Scheibe. Schmidt, H. See Th. Sabalitschka.

Schmidt, Hans, aromatic compounds of V. Differing behaviour antimony. of lithium hydroxide from that of sodium or potassium hydroxide in the hydration of polymeric arylstibinic acids, A., i, 482.

aromatic antimony compounds, A., i, 1203.

Schmidt, Harry, relationship between the internal friction and the chemical

constitution of gases, A., ii, 278.
Schmidt, Julius, and Otto Spoun, the phenanthrene series. XXXIII. Preparation of derivatives of phenanthraquinone and phenanthrene 2-nitrophenanthraquinone, A., i, 665.

Schmidt, John H., action of arsenious chloride on aniline, A., i, 285.

Schmidt, K. See David Holde.

Schmidt, Karl. See Erwin Ott. Schmidt, P. See Paul Jacobsen.

Schmidt, Walter. See Stefan Gold-

schmidt. Schmidt-Hebbel, Edgar. See FritzPaneth.

Schmidt-Nielsen, S., and J. Holmsen, composition of the urine of whales, A., i, 704.

Schmidt-Nielsen, S. See also F. Frog. Schmiedeskamp, Lloyd. See Leonard B. Loeb.

Schmitt, R. See Emil Heuser.

Schnabel, Alfred, the distribution of cinchona alkaloids in the organism, A., i, 290.

a biological method for the estimation of substances which injure the cell and the embryo. II., A., i, 304.

Schneider, A. See Charles Dhéré. Schneider, M. See H. P. Kaufmann. Schneider, Wilhelm, and Edgar Kraft, sulphoacetic acid as condensing agent. IV. isoAcetovanillone, A., i, 749.

Schneider, Wilhelm, and Albert Ross, pyranhydrones. II. The constitution of diarylmethylpyrylium compounds, **A**., i, 1171.

Schneller, Karl. See Hans Fischer. Schödl, H. See Volkmar Kohlschütter. Schöler, G. See A. Morgen.

Schoeller, A., micro-Kipp apparatus for the preparation of air-free carbon dioxide for use in the micro-estimation of nitrogen by Piegl's method, A., ii, 159.

micro-elementary analysis by Pregl's method, A., ii, 160.

simplified construction of the metal parts of the apparatus used in Pregl's micro-analytical method, A., ii, 160.

micro-incineration, A., ii, 654.

WaltherSchoeller, Walter, and Schrauth, preparation of esters of complex mercuridicarboxylic acids and their products of hydrolysis, A., i, 605.

Schöller, Walter. See also Fritz Weigert. Schoen, Marcel. See Auguste Fernbach. Schoen, Rudolf, the non-hamoglobin nitrogen content of corpuscles a contribution to the nitrogen-metabolism of tissues, A., i, 484.

Schönberg, A., o-quinones and 1:2-diketones. IV. Synthesis of ace-

naphthene, A., i, 27.

and Schönberg, A.,O. Kraemer, o-quinones and 1:2-diketones. Benzils of the peroxide [\psi-benzils], A., i, 663.

Schönert, K. See Gustav Tammann. Schönfeld, B. See Andor Fodor.

Schönfelder, Heinrich. See Fritz Mayer.

Schoep, Alfred, curite, a new radioactive mineral, A., ii, 77.

kasolite, a new radioactive mineral, A., ii, 154.

absence of cobalt in cornetite, A., ii, 219.

dewindtite, a new radioactive mineral, A., ii, 305.

stasite, a new mineral dimorphous with dewindtite, A., ii, 386.

becquerelite, a radioactive new mineral, A., ii., 450.

soddite, a new radioactive mineral, A., ii, 451.

Schoep, Alfred, and W. Steinkuhler, the estimation of uranium in presence of phosphoric acid, A., ii, 530.

Schoepfie, C. S., phenyldi-α-naphthyl-carbinol and phenyldi-α-naphthylmethyl, A., i, 337.

Scholl, Roland [with Christian Seer, Richard Weitzenböck, and Arthur Ertl], preparations in the naphthalene

series, A., i, 650.

Scholl, Roland, and Heinrich Neumann, elimination of hydrogen from aromatic nuclei, and union of the latter by means of aluminium chloride. IV. Ring closure with doubly benzoylated naphthalenes, A., i, 261.

Scholl, Roland, and G. Schwarzer, elimination of hydrogen from aromatic nuclei and union of the latter by means V. Experiof aluminium chloride. ments with benzil, stilbene, phenanthrene, A., i, 331.

Scholl, Roland, and Christian Seer, elimination of hydrogen from aromatic nuclei and union of the latter by means of aluminium chloride. Experiments with phenol ethers and with diphenylmethane, A., i, 336.

Scholl, Roland, and Christian Seer [with Josef Daimer], elimination of hydrogen from aromatic nuclei and union of the latter by means of aluminium chloride, A., i, 258.

Scholz, P. See Herbert Freundlich. Schomer, Arnold, estimation of yohimbine in yohimba bark, A., ii, 797.

Schonebaum, C. W., the action of ozone on pure solutions of dextrose, lævulose, \mathbf{and} sucrose, A.,

the action of ozone on pure solutions of lactose, A., i, 717.

the action of hydrogen peroxide on pure solutions of dextrose, lævulose, sucrose, lactose, and maltose, A., i,

the action of ozone on pure solutions of maltose, A., i, 921.

Schoneboom, C. G., diffusion and intertraction, A., ii, 690.

Schoofs, M., essential oils from Myrica gale, L., A., i, 1043.

Schoorl, Nicolaas, graphic deductions with regard to the dissociation of weak electrolytes, A., ii, 31.

the titration of the cinchona alkaloids and their salts, A., ii, 538.

Schoorl, Nicolaas, and (Mlle) A. Regenbogen, the system water-ethyl alcohol-chloroform; miscibility of the three components in different proportions and some practical applications, A., i, 215.

the system water-ethyl alcohol-carbon disulphide; miscibility of the three components in different proportions and some practical applications, A.,

i, 419.

Schoorl, Nicolaas, and F. N. B. de Weerd, the system, acetanilidewater, A., i, 247.

Schoutissen, H. A. J., the action of nitrous acid on phenols, A., i,

the velocity of reaction of diazotisation in its bearing on the problem of substitution in the benzene ring. II. The character of the diazonium group, A., i, 181.

Herbert. See MaxSchotte, Bergmann.

Schrader, Fritz. See Peter Paul Koch.

Schrader, Hans, the spontaneous oxidation of lignin, natural humus material and coal and the influence of alkali thereon, A., i, 637.

Schranz, Karl. See Karl Fleischer.

Schrauth, Walther, and Hanns Geller, the preparation of α-amino-β-hydroxyacids from olefine-carboxylic acids, A., i, 1125.

Schrauth, Walther. See also Walter Schoeller.

Schreinemakers, Frans Antoon Hubert, non-, uni-, and bi-variant equilibria. XXI., A., ii, 430.

Schreiner, Erling, new conceptions of electrolytes. III. The hydration of the hydrogen ion, A., ii, 468.

new conception of electrolytes. The dissociation state of acids of medium strength, especially chloroacetic acid in water and in salt solutions, A., ii, 736.

Schreiner, Erling. Sec Winther.

Schroeder, E. von. See Gustav F. Hüttig. Schroeder, Heinrich, and Trude Horn, the relative distribution of carbohydrates in foliage in its dependence on water content, A., i, 906.

Schroeter, Georg [with E. Kindermann, C. Dietrich, C. Beyschlag, C. Fleisch-E. Riebensahm, and Oesterlin], hydrogenated naphthalenes and their transformations. II. Nitroand amino-derivatives of tetrahydro-

naphthalene, A., i, 123.

Georg [with Svance, H. Schroeter, Einbeck, Hanns Geller, and E. Riebensahm], hydrogenated naphthalenes and their transformations. III. Tetrahydronaphthalenesulphonic acids, tetrahydronaphthols and their

derivatives, A., i, 126.

Schroeter, Georg [with G. Vossen, F. Stahl, H. Haehn, and C. Prigge], hydrogenated naphthalenes and their transformations. I., A., i, 122.

Schroeter, Georg, and Tetralin G. m. b. H., preparation of α -keto-substituted hydrogenated naphthalenes, A., i, 1036.

preparation of symmetrical octahydro-

anthracenes, A., i, 1136.

preparation of symmetrical octabydrophenanthrenes, A., i, 1137.

Schryver, Samuel Barnett. See Harold W. Buston, and Donald Herbert Frank Clayson.

Schubardt, Wolfgang. See Hermann Strauss.

Schubert, Martha. See .Clemens Schaefer.

Schubert, Max. See Hans Fischer. Schuegraf, Karl. See Rudolf Pummerer. Schuftan, Paul. See Walter Herz.

Schulenburg, Wilhelm. See Heinrich Wieland.

Schuler, J., NN'-di(p-allyloxyphenyl)acetamidine, A., i, 179.

Schulte, Therese. See Fritz Meyer. Schultze, Ernst. See Otto Dimroth. Schulz, Fr. N., the colouring matter

and wax of the blood louse (Schizoneura lanigera), A., i, 494.

Schulz, H. See H. von Wartenberg. Schulze, Alfred, the deviations from the gas laws of carbon disulphide, A., ii, 53.

binary liquid mixtures, A., ii, 424. Schulze, Heinrich, and Kurt Pieroh, betulin, A., i, 1045.

Schulze, M. See Friedrich Dolezalek. Schumacher, Eugen. See Hartwig Franzen.

See ErichSchumacher, Richard. Schmidt.

Schumm, Otto, hæmatoporphyrin in the urine in cases of lead poisoning, A., i, 609.

the detection of small quantities of lead in urine, A., ii, 317.

Schumm, Otto, and A. Papendieck, the presence and detection of tyrosine in ūrine, A., i, 899.

Schuster, Kurt. See Kurt Heinrich Meyer.

Schwab, G. M. See Ernst Hermann Riesenfeld.

Schwalbe, Carl Gustav, and Ernst Becker, the elimination of furfuraldehyde from oxycelluloses; the solubility in alkali and the reduction capacity of oxycelluloses, A., i, 232.

Schwappacher, H. See Otto Fischer. Schwartz, A. See Louis Fournier.

Schwartz, Benjamin, hæmotoxins from parasitic worms, A., i, 493.

Schwarz, P., detection of benzene in light petroleum, A., ii, 531.

Schwarz, Robert, and Walter Friedrich, the influencing of the catalysis of hydrogen peroxide with platinum by Röntgen rays, A., ii, 436.

Schwarz, Robert, and Erika Herrmann, metachromism of toluidine-blue, A., i, 930.

Schwarz, Robert, and Erich Konrad, the mechanism of the formation of silane from magnesium silicide. I., A., ii, 846.

Schwarz, Robert, and Heinrich Stock, the effect of colloids on silver bromide emulsions, A., ii, 731.

Schwarzenberg, K. See Julius Tröger. Schwarzer, G. See Roland Scholl. Schwebel, W. See Ernst Berl. Schweiger, K., the solubility of cellulose

acetate in the salts of the alkali- and alkaline-earth metals, A., i, 324.

Schwen, Gustav. See Wilhelm Steinkopf.

Schwenk, Erwin, condensation reactions of formic acid, A., i, 153. preparation of hydroxyanthraquin-

ones from nitroanthraquinones, A., i, 153.

Scilasi, Wilhelm. See Karl Freudenberg.

Sciortino, Antonio, accurate ureometer, A., ii, 794.

Scofield, C. S., effect of alum on silicate colloids, A., i, 212.
Scott, A. F. See Gregory Paul Baxter.

Scott, Alfred W. See Lauder William Jones.

Scott, E. Kilburn, piezo-electricity of potassium sodium tartrate crystals, A., ii, 609.

Scott, James, and Robert Robinson, note on 2:3- and 2:5-dinitro-p-toluidines, T., 844.

Scott, John Richard, and Julius Berend Cohen, the condensation of aromatic o-aminosulphonic acids with isocyanic acid, T., 2034.

Scott, M. See William Ridgely Orndorff. Scott, Wilfred W., glacial acetic acid method for estimating uranium in carnotite, A., ii, 788.

Scottish Dyes, Ltd. See Arthur Hugh Davies, and John Thomas.

Sears, O. H. See Samuel D. Conner.

Šebor, J. See Julius Stoklasa.

Seefried, Hermann. See Heinrich Wieland.

Seel, K., the analysis of high-percentage tungsten alloys, A., ii, 876.

Seeliger, Rud., excitation of atoms to emission of light by electron col-lisions. IV. Behaviour of individual members of a series, A., ii, 17.

Seeliger, Rud., excitation of atoms to emission of light by electron collisions, A., ii, 804.

Seeliger, Rud., and K. Lapkamp, absorption of gases by crystals, A., ii, 30.

Seeman, H., linear polarisation of the blue light from the focus of the Lilienfeld Röntgen tube, A., ii, 8. a precision Röntgen spectrograph, A.,

ii, 15.

Seemann, Jon. See Julius von Braun. Seer, Christian. See Roland Scholl.

Sefton, Lily Bell. See William Lloyd Evans.

Segaller, David, David Henry Peacock, and British Dyestuffs Corporation, Ltd., manufacture of hydroxy- and sulphohydroxy-derivatives of anthraquinone, A., i, 560.

Seiberth, M. See M. Hartmann. Seidel, C. F. See Leopold Ruzicka.

Seidel, Fritz. See Alfred Eckert. Seidel, Walter. See Max Trautz.

Seidell, Atherton, isolation of vitamin, A., i, 887.

further experiments on the isolation of the antineuritic vitamin, A., i, 1078.

Seidl, R. See Benno Bleyer.

Seka, Reinhard. See Ernst Philippi. Sekera, F., theory of the mechanical synthesis of colloids, A., ii, 693.

Seltz, Harry. See Herbert S. Harned. Sen, Nirmal Kumar. See Sikhibhushan Dutt.

Senderens, Jean Baptiste, and Jean Aboulenc, catalytic hydrogenation of polyphenols by the wet way, A., i, 136.

catalytic preparation of cyclohexanetriols, A., i, 337.

Sen Gupta, Hemendra Kumar, and Stanley Horwood Tucker, the oxida-

tion of α-dinaphthaxanthens, T., 557. Senseman, C. E. See O. A. Nelson.

Servantie, L. See P. Mauriac.

Settle, Richard Hardcastle. See Hamilton McCombie.

Seydel, Karl. See Heinrich Biltz.

Seyewetz, Alphonse, and P. Sisley, antioxidants and antioxygenisers, A., ii, 628.

Seyewetz, Alphonse, and Vignat, action of sodium sulphite on nitrobenzene, A., i, 241.

Shaffer, Philip Anderson, antiketogenesis. III. Calculation of the ketogenic balance from the respiratory quotients, A., i, 83.

quotients, A., i, 83.

Shaffer, Philip Anderson. See also A. P. Briggs.

Shaffer, Sherman, substances dissolved in rain and snow, A., i, 512.

Shah, R. C. See John Joseph Sudborough.

Shannon, Earl V., cristobalite in basalt from Washington, A., ii, 450.

velardenite from California, A., ii, 517. an andorite-bearing silver ore from Nevada. A., ii, 859.

Nevada, A., ii, 859.
Shannon, Earl V., and Edgar Theodore
Wherry, white chlorites, A., ii, 517.

Wherry, white chlorites, A., ii, 517.
Shannon, Earl V. See also Edgar
Theodore Wherry.

Shannon, (Miss) Mary Isobel. See James Colquboun Irvine.

Sharp, Paul Francis, and Frank Henry
MacDougal imple method of electrometric tite on in acidimetry and

alkalimetry .., ii, 579.

Sharp, Thomas Marvel. See Thomas Anderson Henry.

Shaver, W. W., the absorption spectrum of liquid and gaseous oxygen, A., ii, 331.

Shaw, J. A., method for the estimation of free and combined carbon dioxide, A., ii, 226.

Sheaff, Howard M., estimation of minute amounts of gaseous oxygen and its application to respiratory air, A., ii, 582.

Shedd, Oliver March, a comparison of the calcium content of some virgin and cultivated soils of Kentucky by an improved method for the estimation of this element, Δ., ii, 527.

Sheehy, Edmond John, origin of milk fat, and its relation to the metabolism of phosphorus, A., i, 400.

Sheldon, Wilfrid. See Edward Hope.
Shenefield, S. Lantz, Frank C. Vilbrandt, and James R. Withrow, sulphate-free sulphites for standard sulphur dioxide solutions, A., ii, 45.

Shenstone, Allen G., an attempt to detect induced radioactivity resulting from α-ray bombardment, A., ii, 415.

Shenstone, Allen G., and Herman Schlundt, a determination of the number of α-particles per second emitted by thorium-C of known γ-ray activity, A., ii, 465.

Sheppard, Samuel Edward, and Felix A. Elliott, the drying and swelling of gelatin, A., i, 387.

Sheppard, Samuel Edward, S. S. Sweet, and Auber J. Benedict, elasticity of purified gelatin jellies as a function of the hydrogen-ion concentration, A., ii, 747.

Sherman, Henry Clapp, chemical investigation of amylases and related enzymes, A., i, 66.

Sherman, Henry Clapp, and Mary L. Caldwell, the influence of arginine, histidine, tryptophan, and cystine on the hydrolysis of starch by purified

pancreatic amylase, A., i, 283.

Sherman, Henry Clapp, Victor K. La

Mer, and H. L. Campbell, effect of temperature and of the concentration of hydrogen ions on the rate of destruction of antiscorbutic vitamin (vitamin-C), A., i, 207.

estimation of the antiscorbutic vitamin (vitamin-C), A., ii, 407.

Sherman, Henry Clapp, and Florence Walker, the influence of certain aminoacids on the enzymic hydrolyses of starch, A., i, 283.

Sherman, Henry Clapp, and Marguerite Wayman, effect of certain antiseptics on the activity of amylases, A., i, 282.

Sherman, Henry Clapp. See also Victor K. LaMer.

Sherwin, Carl P. See J. A. Killian, and George J. Shiple.

See Burton A. Shevky, Marian C. Myers.

Shibata, Yaji, and Kenjiro Kimura, chemical investigations of Japanese minerals containing rarer elements. II. Analysis of columbite and monazite of Ishikawa, Iwaki province, A., ii, 220.

chemical investigation of Japanese minerals containing rarer elements. IV. Samarskite and an unnamed Ishikawa, Iwaki mineral from province, A., ii, 516.

supplementary note on ishikawaite, a new mineral from Ishikawa, Iwaki province, A., ii, 861.

Shibata, Yuji, and Willy Nagai, the absorption of colouring matters of the flavone group. II. Absorption spectra of phenyl styryl ketone and its derivatives, A., ii, 413.

Yuji, and Taku Uemura, Shibata, Japanese minerals containing rare III. Analyses of beryl of elements. Naegi, Mino province, Λ., ii, 305.

Shimidzu, Toraji. See **Yasuhiko** Asahina.

Shimizu, Tomihide, the fate of some polysaccharides in the digestive tract of mammals, A., i, 82.

hydrolysis of some polysaccharides (inulin, lichenin, and hemicellulose) in the digestive tract of mammals, A., i, 82.

influence of some polysaccharides (inulin, lichenin, and hemicellulose) on protein exchange, A., i, 83.

Shimizu, Tomihide, the chemical composition of brain, A., i, 85.

the behaviour of pyrrole in the animal body, A., i, 91.

behaviour of phrenosin in the animal

body, A., i, 91. Shimizu, Tomihide. See also Martin Jacoby.

Shimo, Kōtarō, constituents of Phellodendron amurense, A., i, 99.

Shimomura, Akira, and Julius Berend Cohen, the interchange of alcohol radicles in esters. I. and II., T., 883,

Shiple, George J., and Carl P. Sherwin, synthesis of amino-acids in animal organisms. I. Synthesis of glycine and glutamine in the human organism, A., i, 492.

fate of some of the phenylacetylated amino-acids in the animal organism, A., i, 1093.

Shlager, M. See Ellwood B. Spear.

Shoesmith, John Baldwin. See Arthur Lapworth.

Shohl, Alfred T., effect of hydrogen-ion concentration on the estimation of calcium, A., ii, 395.

Shohl, Alfred T., and Frank G. Pedley, a rapid and accurate method for estimating calcium in urine, A., ii, 395.

Shoji, R. See Joseph Barcroft.

Short, Wallace Frank, and John Charles Smith, the condensation of phenols with the hydrochlorides of cyanamides and carbodi-imides, and its relation to the Hoesch reaction, T., 1803.

Showalter, M. F., and R. H. Carr, characteristic proteins in high- and low-protein maize, A., i, 1103.

Siderfin. Norman Edward. See William Lewcock.

Sidersky, D., solubility of crystallised strontium hydroxide, A., ii, 501.

Sidgwick, Nevil Vincent, and Herbert Clayton, the solubility of the aldehydobenzoic acids, T., 2263.

Sidgwick, Nevil Vincent, and Wilfred Marsden Dash, the solubility and volatility of the nitrobenzaldehydes, T., 2586.

Sidgwick, Nevil Vincent, and (Miss) Elinor Katharine Ewbank, the solubility of the alkali salts of benzoic and the hydroxybenzoic acids in water, T., 1844.

Sidgwick, Nevil Vincent, and Joseph Alfred Hector Roberts Gentle, the solubilities of the alkali formates and acetates in water, T., 1837.

Sidgwick, Nevil Vincent, and Thomas Weston Johns Taylor, the solubility and volatility of 3:5-dinitrophenol, T., 1853.

Sidgwick, Nevil Vincent, and Sydney Leonard Turner, the solubility of the

chlorophenols, T., 2256.
Siebeck, R. [with D. Hackmack], exchange of chlorine between the red blood corpuscle and the surrounding solution. I. The influence of narcotics on the exchange of chlorine, A., i, 1208.

Siebeneck, H., the influence of the elements of the oxygen group on paraffin wax, A., i, 417.

Sieber, Wilhelm. See Theodor Curtius. Siebert, Erich. See Emil Fromm.

Sieburg, Ernst, and Franz Bachmann, the influence of treatment with alkali or bromine on the physiological activity and foaming capacity of some saponaceous substances, A., i, 404.

Siedentopf, H. See Heinrich von Halban.

Siegbahn, Manne, new measurements of precision in the X-ray spectrum, A., ii, 104.

Siegesmund, J. C. See M. G. Mellon.Siegfried, K., the hydrocyanic acid question, A., i. 614.

Sieglitz, Adolf [with Hans Spitzer], fission of aa-diphenylethyl-\(\beta\)-ureth-

ane, A., i, 828.

Sieglitz, Adolf, and H. Jassoy, the fluorene series. VII. Dibenzofutvene, A., i, 820.

Sieglitz, Adolf. See also Fritz Mayer. Sieke, Fritz, formation of phenol by bacteria, A., i, 902.

Siemssen, J. A., the triboluminescence of uranium salts and three new organic uranium compounds, A., ii,

Sievers, W. C., and L. Givaudan & Co., preparation of vanillin from acetylisoeugenol, A., i, 38.

Sieverts, Adolf, velocity of decomposition of crystalline substances, A., ii, 700.

Sieverts, Adolf, and H. Theberath, velocity of decomposition of silver permanganate, A., ii, 360.

Silberrad, Oswald, researches on sulphuryl chloride. II. A new chlorinating agent; preparation of polychloro-derivatives of benzene, T.,

the formation of hexachloroethane from chloropicrin, A., i, 2.

Silberstein, Adolf, estimation of hydrogen-ion concentration in urine with indicators, A., ii, 452.

Silberstein, Ludwik, some spectrum lines of neutral helium derived theoretically, A., ii, 674.

Silberstern, Ernst, modification of the iodine test for bile pigments in urine,

A., ii, 799. Silsbee, Clara G. See Richard Fay Jackson.

Simion, Frilz, a proposed estimation of chromium and nickel in steel, A., ii, 529.

Simola, P. G. See Ossian Aschan. Simmonds, Nina. See Victor E. Levine, and C. R. Orton.

Simmons, John P. See Arthur Becket Lamb.

Simms, H. S. See $Ph\alpha bus A.$ Levene. Simon, Franz, determination of specific heats at low temperatures, A., ii, 684.

Simon, Italo, behaviour of 5-iodoguaiacol in the human organism, A., i, 970.

Simon, Kurt. See Hans Lecher.

Simon, Louis Jacques, the chromic oxid ation of the homologues of acetic acid, A., i, 803.

direct oxidation of esters of hydroxyacids by oxygen or air, A., i, 984. oxidation with mixtures of sulphuric

acid and chromates, A., ii, 593. the function of chromic oxide in oxid-

ation by means of sulpho-chromic mixture, A., ii, 868.

Simon, Louis Jacques, and A. J. A. Guillaumin, quantitative determination of carbon and hydrogen by means of the sulpho-chromic mixture, A., ii, 867.

Simon, Louis Jacques, and L. Zivy, the neutralisation of tartaric acid by potassium hydroxide in presence of chlorides of alkaline earths, A., ii,

Simon, Max, the influence of asphyxiation on the permeability of the limiting membrane of the muscle fibres, A., i, 196.

Simon, Max. See also Hermann Lange. Simonnet, H. See R. Tiger.

Simonnet, M. See Paul Cristol.

Simons, Harold Lester, estimation of

gases in metals, A., ii, 719. Simonsen, John Lionel, the constitution of the terpene present in the essential oil from Andropogon Jwarancusa, Jones, T., 2292. the essential oil from the leaves of

Abies pindrow, Spach, A., i, 753. Simonsen, John Lionel, and Madyar Gopal Rau, the essential oil from Gopal Rau, Chic Selection Malcomii, T., 876.

Charles. See (Miss) Lucy

Simpson, Charles.

Higginbotham.

Simpson. Daniel H. See Ernest C. McKelvy.

Simpson, Stephen G., effect of the presence of filter-paper on permanganate-oxalate titrations, A., 11, 234. Sims, L. B. See Floyd E. Bartell. Sindlinger, F. See Felix Mach.

Singh, Bawa Kartar, recent advances in stereochemistry, A., ii, 103.

Singh, Bawa Kartar, Raghunath Rai, and Rattan Lal studies in optically active dyes. I. Camphoreins, T., 1421.

Singh, Gopal, phototropy of inorganic salts; cuprous chloride and bromide,

T., 782.

Singleton, W., and H. Williams, in-adequacy of the "A.R." test for alkalis in calcium carbonate, A., ii,527.

Sinha, J. N. See Julius Huebner. Sinkinson, Eric. See William Arthur

Bone.

Sirear, Anukul Chandra, and Sikhi-bhushan Dutt, dyes derived from camphoric anhydride, T., 1283.

dyes derived from phenanthraquinone. I. Phenanthranaphthazines,

1944.

Sirovich, G., and A. Cartoceti, phenomena of diffusion in metals in the solid state and cementation of nonferrous metals. I. Cementation of copper by means of ferro-manganese, A., ii, 68.

phenomena of diffusion in metals in the solid state and cementation of non-ferrous metals. II. Cementation of copper by means of chromo-

manganese, A., ii, 571. Sisley, P. See Alphonse Seyewetz.

Sisson, Warren R., and Willey Denis, inorganic constituents of milk. I. Chlorides in human milk, A., i, 87.

Sisson, Warren R. See also Willey Denis.

Sjöberg, K. See Olof Svanberg.

Skaupy, Franz, molecular condition of metals dissolved in mercury, A., ii, 297.

Skinker, M. F., the motion of electrons in carbon dioxide, A., ii, 837.

Skinner, Helen H. See Victor Lenher. Skita, Aladar, determination of the configuration of the stereoisomeric hexamethylenes, A., i, 534.

the mechanism of catalytic hydrogenation, A., ii, 207.

Skita, Aladar, and A. Schenck, stereoisomerism of cyclic hydrocarbons, A., i, 240.

Skrabal, Anton, Landolt's reaction, A., ii, 488.

Skrabal, Anton, and Emmy Raith, the alkaline hydrolysis of the esters of the two ethylenedicarboxylic acids, A., ii, 434.

Skrabal, Anton, and Anton Schiffrer, velocity of hydrolysis of acetals, A., ii,

Skraup, Siegfried, and Leo Freundlich, halochromic phenomena with carbinols, A., i, 539.

Skraup, Siegfried, and Marie Moser, benzoxazole derivatives, A., i, 574.

Skutil, František, the Kleemann modification of the Kjeldhal process, A., ii, 582.

Slagle, Edgar A. See Solomon Farley Acree, and R. R. Mellon.

Slansky, Pawel, the drying of fatty oils, A., i, 1113.

Slater, F. P., excitation of γ -radiation by α-particles from radium emana-

tion, A., ii, 13.
rise of γ-ray activity of radium
emanation, A., ii, 681.

Sluiter, E., periodicity of enzymes; the lipase of the stomach, A., i, 887.

Slyke, Donald D. van, the measurement of buffer values and the relationship of buffer value to the dissociation constant of the buffer and the concentration and reaction of the buffer solution, A., i, 893.

apparatus for estimation of the gases in blood and other solutions, A., ii,

158.

acidosis. XVIII. Estimation of the hydrogen carbonate concentration of the blood and plasma, A., ii, 672.

Slyke, Donald D. van, Joshua Harold Austin, and Glenn E. Cullen, effect of ether anæsthesia on the acid-base balance of the blood, A., i, 1085.

Slyke, Donald D. van, and Alma Hiller, an unidentified base among the hydrolytic products of gelatin, A., i, 63.

Slyke, Donald D. van, and William C. Stadie, estimation of the gases of the blood, A., ii, 78.

Slyke, Donald D. van. See also Joshua Harold Austin, A. Baird Hastings, and Alma Hiller.

Smekal, Adolf, fine structure of Röntgen spectra, A., ii, 15, 600.

systematics of Röntgen spectra, A., ii,

theory of Röntgen spectra. II., A., ii, 607.

Smelkus, H. See Julius Marcusson. Smiles, Samuel, and Hugh Graham, derivatives of diphenylthiolbenzene, Т., 2506.

Smiles, Samuel, and Douglas Creese Harrison, p-dithiobenzoic acid, T., 2022.

Smules, Samuel, and Ernest Wilson
McClelland, the interaction of aromatic disulphides and sulphuric acid, T., 86.
Smirnov, Alexander P., 1-phenyl-4-

pyridone, A., i, 464.

Smirnov, Alexander P. See also Paul Karrer.

Smith, Alpheus W., and Cecil E. Boord, absorption spectra of benzeneazophenol and its derivatives, A., ii, 602.

Smith, Clarence Joseph, an experimental comparison of the viscous properties of (a) carbon dioxide and nitrous oxide; (b) nitrogen and carbon monoxide, A., ii, 549.

viscosity and molecular dimensions of sulphur dioxide, A., ii, 686.

viscosity and molecular dimensions of gaseous carbon oxysulphide, A., ii, 686.

Smith, Clarence Joseph. See also Alexander Oliver Rankine.

Smith, C. M. See J. J. T. Graham. Smith, Edgar Fahs, sodium tungstates.

I., A., ii, 774. Smith, Edwin S. See John Stewart.

Smith, Francis Edward. See Donald Rhind.

Smith, Frederick William. See Thomas James Drakeley.

Smith, Gilbert B. L. See Victor Lenher. Smith, G. Frederick. See Hobart Hurd Willard.

Smith, George McPhail, additive compounds of gold haloids with benzyl sulphide, A., i, 933.

precipitation of metals by hydrogen

sulphide, A., ii, 626.

Smith, Henry George, and Arthur Ramon Penfold, preparation of thymol, menthone, and menthol from eucalyptus oils, A., i, 31.

Smith, Henry George. See also John Read.

Smith, Homer W., nature of secondary valency. III. Partition coefficients in the system water-ethyl ether, A., ii, 270.

nature of secondary valency. IV. Partition coefficients in the system glycerol-acetone, A., ii, 270.

nature of secondary valency. V. Partition coefficients in systems containing water as one component, with special reference to the absolute values of the series constants, A., ii, 430.

nature of secondary valency. VI., A., ii, 431.

Smith, (Miss) Isobel Agnes. See Alexander McKenzie.

Smith, John Charles. See Wallace Frank Short.

Smith, John David Main, Friend's theory of valency, A., ii, 279.

Smith, John David Main. See also Gilbert Thomas Morgan.

Smith, James Leonard Brierley. See William Hobson Mills, and (Sir) William Jackson Pope.

Smith, Lennart, preparation of β-chlorohydrins, A., i, 3.

acetic acid esters of multivalent alcohols. I. Is there a connexion between the velocity of saponification and the method of preparation of the glycerol acetins? A., i, 915.

titration of tin with ferric chloride,

A., ii, 398.

Michael's addition and separation rule, A., ii, 751.

Smith, Lennart, and Hugo Olsson, dependence of the velocity of alkaline hydrolysis of esters on the constitution of the alcohol. I., A., ii, 701.

Smith, Lennart, and B. Platon, kinetic determinations of the constitutions of hydroxy- and amino-chloropropanes, A., i, 1121.

Smith, L. I., the action of halogens on ethyl acetoacetate, A., i, 318.

Smith, L. I. See also Elmer Peter Kohler.

Smith, Millard, a micro-modification of Benedict's method for the estimation of reducing sugar in urine, A., ii, 663.

Smith, Maurice E., Friedel and Crafts' reaction; the carbomethoxybenzoyl chlorides with aromatic hydrocarbons and aluminium chloride, A., i, 140.

Smith, Nicol H. See John H. Müller.
Smith, Thomas M. See Arthur E. Hill.
Smith, William Thompson, and Reginald
B. Parkhurst, solubility of sulphur
dioxide in suspensions of calcium and
magnesium hydroxides, A., ii, 761.

Smithells, Arthur, the blue flame produced by common salt on a coal fire, A., ii, 645.

Smithells, Colin James. See General Electric Co., Ltd.

Smithey, Ira W. See Alwin Sawyer Wheeler.

Smits, Andreas, electromotive behaviour of aluminium, A., ii, 20.

application of the theory of allotropy to electromotive equilibria. IV., A., ii, 110.

influence of intensive drying on internal change, A., ii, 358.

Smits, Andreas, and C. J. de Gruyter, electromotive behaviour of aluminium. III., A., ii, 21.

Nicholas Karrachy, a rapid Smitt, method for the estimation of acetaldehyde, A., ii, 402.

detection and estimation of fluorides, A., ii, 716.

nolenski, Eugenie, and Kazimir Smolenski, preparation of annines Smolenski, from alcohols and ammonia, A., i, 234.

Smolenski, Kazimir. See Eugenie Smolenski.

Smorodincev, A., reductases. I. Some conditions of the activity of starch reductase. I., A., i, 1201.

the materials extracted from muscles. XXI. The organic bases of the flesh of swine. I., A., i, 1213.

Smyth, Charles P. See Theodore William Richards.

Smythe, John Armstrong, use of iron pyrites in a Friedel-Crafts' reaction, T., 1270.

decomposition of benzyl disulphoxide, T., 1400.

Smythe, William R., the spectrum of fluorine, A., ii, 99.

Snapper, J., and Ernst Laqueur, estimaof hippuric acid in urine, A., ii, 92.

Snapper, J., and W. J. van Bommel van Vloten, estimation of indican in bloodserum, A., ii, 793.

Société Chimique des Usines du Rhône, preparation of hydroxyaldehydes and their derivatives, A., i, 257.

preparation of n-butyl p-aminobenzoate, A., i, 827.

preparation of acetic anhydride, acetaldehyde, or acetic acid from ethylidene diacetate, A., i, 915.

preparation of a basic aluminium salicylate, A., i, 1151.

Society of Chemical Industry in Basle, preparation of p-methylaminophenol, A., i, 31.

preparation of soluble derivatives of camphoric acid, A., i, 254.

preparation of o-hydroxyazo-colouring matters, A., i, 385.

preparation of intermediate products and colouring matters, A., i, 579. preparation of benzyl p-aminobenzoate,

A., i, 828.

preparation of a derivative of pyridine-3-carboxylic acid (nicotinic acid), A., i, 860.

preparation of an unsaturated ether of p-dihydroxydiphenylacetamidine, A., i, 953.

preparation of dialkylamides of nicotinic acid, A., i, 1058.

Society of Chemical Industry in Basle, preparation of B-thionaphthisatin, A., i, 1179.

manufacture of amino-alcohols of the

quinoline series, A., i, 1179. Soderstrom, G. F. See H. V. Atkinson. Sörensen. See Otto Diels.

Sörensen, M. See Sören Peter Lauritz Sörensen.

Sörensen, Sören Peter Lauritz, M. Sörensen, and K. Linderström-Lang, the "salt error" of the quinhydrone electrode, A., ii, 111.

Solonina, B. See Friedrich Kehrmann.

Soma, S. See Koji Miyake. Sommelet, Marcel, and Jean Guioth, hydrogenation by formic acid of some quaternary salts of hexamethylenetetramine, A., i, 333.

Somogyi, R., swelling of fibrin by acids, A., i, 182.

action of acids on fermentation by yeast, A., i, 201.

Somogyi, R. See also Isidor Traube. Sondén, Klas, the application of coloured

glasses instead of liquids in colonimetric researches, A., ii, 862.

Sonn, Adolf, and Susanne Falkenheim, synthesis of fisetole, A., i. 1163.

Soutar, Charles William. See Frederick William Atack.

Souza, David Henriques de. See James Arthur Hewitt.

Spacu, G., complex magnesium salts, A., i, 859.

Spath, Ernst, the anhalonium [cactus] alkaloids. II. Constitution of pellotine, anhalonidine, and anhalamine, A., i, 163.

constitution of kynurenic acid, A., i, 173.

the anhalonium [cactus] alkaloids. III. The constitution of anhaline, A., i, 567.

Späth, Ernst, and Karl Böhm, constitution of the alkaloids of the calumba root, A., i, 1174.

Spath, Ernst, and Karl Fuchs, the active constituents of the true coto-bark; the synthesis of cotoin, A., i, 558.

Späth, Ernst, and Norbert Lang, conversion of berberine into palmatine, A., i, 166.

the constitution of corydaline, A., i, 168 the synthesis of laudanine, A., i, 568.

Späth, Ernst, and Hans Röder, anhalonium [cactus]alkaloids. IV. Synthesis of anhalamine, A., i, 852.

Späth, Ernst, and Erich Tschelnitz, the constitution of ricinine, A., 1, 571.

Späth, Wilhelm, selenium [cells], A., ii, 189.

Speakman, John Bamber. See John Greenwood Heap, and William Jacob Jones.

Spear, Ellwood B., P. F. Jones, A. S. Neave, and M. Shlager, action of ultra-violetlight on colloidal platinum, A., ii, 11.

Speckan, Carl, changes in the sweetness of dulcin (p-phenetolocarbamide) caused by chemical alterations of the molecule and the sweetening power of derivatives of p-hydroxyphenylcarbamide, A., i, 579.

phenylcarbamide, A., i, 579.

Speich, Lconhard. See Julius Meyer.

Speidel, Johann Adolf. See Burckhurdi
Helferich.

Speirani, M. See G. Charrier.

Spencer, George Douglas. See British
Dyestuffs Corporation, Ltd., and
Arthur George Perkin.

Arthur George Perkin.

Spencer, James Frederick, and Kathleen
Proud, electrolysis of sodium silicate
solutions, A., ii, 611.

Sperry, W. N. See Roger Adams.

Speyer, Edmund, and Alfred Gustav Becker, action of hydrogen peroxide on cinchona alkaloids, A., i, 674.

Speyer, Edmund, and Günther Becker, morphine, A., i, 675.

Speyer, Edmund, and Hermann Wieters, hydrogenation of isocodeine and ψ-codeine, A., i, 47.

codeineoxidesulphonic acids and their derivatives, A., i, 169.

Speyer-Haus, Georg, preparation of derivatives of 3:3'-diamino-4:4'-dihydroxyarsenobenzene, A., i, 481.

Spiegel, E. A. See Herbert Elias. Spiegel, Leopold, enzymic fat synthesis,

A., i, 694. Spiller, John, obituary notice of, T.,

748.

Spiro, Karl, the calcium-potassium

action, A., i, 85.
lyotrope series and β-oxidation, A., i,
489.

decarboxylation, A., i, 1213.

Spiro, Karl, and A. Stoll, the active constituent of ergot, A., i, 47.

Spitzer, Anna. See J. Pollak.

Spitzer, Hans. See Adolf Sieglitz. Sponsel, K. See Erich Müller.

Spoun, Otto. See Julius Schmidt.

Spreckelsen, Otto. See Ernst Thielepape.

Springer, Friedrich, comparative plant chemistry. III. Campanula rotundifolia, L., A., i., 797.

Sproesser, William C., and Guy B.
Taylor, vapour pressures of aqueous solutions of nitric acid, A., ii, 143.
Ssajevic, V. See Maximilian Sameć.

Staden, A. von. See Adolf Windaus.

Stadie, William C., mechanical shaker and other devices for use with the van Slyke blood gas apparatus, A., ii, 78.

Stadie, William C. See also Donald D. van Slyke.

Stadnikoff, George, chemical adsorption, A., ii, 619.

Stäckel, Walter. See Max Trautz.

Staehling. Charles, the radioactivity of the oxides of granium. A., ii. 106.

the oxides of uranium, A., ii, 106. Stärkle, M. See W. D. Treadwell.

Stäuble, Gustav. See Hartwig Franzen.

Stahel, E. See A. Piccard.

Stahl, F. See Georg Schroeter. Staib, K. See Alexander Gutbier.

Stanek, Vladimir, polarisation of normal sucrose solution, A., ii, 167.

Stansell, Lionel William, obituary notice of, T., 2916.

Stanton, Ralph E. See Philip H. Mitchell.

Starczewska, (Mllc) H. See Wojciech Swientoslawski.

Stark, Johannes, the structure of carbon chains, A., i, 2.

Starkey, E. B., and Neil E. Gordon, thermo-regulator, A., ii, 547.

Starkey, E. B. See also Neil E. Gordon.

Starlinger, Wilhelm, the flocculating capacity of human blood-plasma, A., i, 288.

agglutination and velocity of sedimentation of corpuscles. II., A., i, 289.

Starr, Henry E., human mixed saliva.

 Determination of the hydrogen-ion concentration of human mixed saliva.
 Variations in the hydrogen-ion concentration, A., i, 1209.

Stasiak, A., blood sugar, A., i, 1208.

Stateczny, Valentin. See Julius Meyer. Staub, H., facilitation of intermediary sugar metabolism, A., i, 83.

Staub, Max. See Paul Karrer.

Standinger, Hermann, ketens. XXXVIII. Aliphatic diazo-compounds. XXV. Aliphatic diazo-compounds and ketens, A., i, 238.

ketens. XXXIX. Aliphatic diazocompounds. XXVI. Behaviour of ring systems, A., i, 240.

Staudinger, Hermann, and A. Binkert, alkali salts of benzil and the benzilic acid transformation, A., i, 1016.

acid transformation, A., i, 1016.

Staudinger, Hermann, and W. Braunholtz, organic compounds of phosphorus. V. Action of carbonylene derivatives on phosphazines, A., i, 70.

Staudinger, Hermann, and J. Fritschi, isoprene and caoutchouc. V. The hydrogenation of caoutchoue and its constitution, A., i, 1043.

Staudinger, Hermann, and Ernst Hauser, ketens. XXXVII. Ketenimine derivatives, A., i, 28.

new organic compounds of phosphorus. IV. Phosphineimines, A., i, 68.

Staudinger, Hermann, W. Kreis, and W. Schilt, the addition of hydrogen haloids to isoprene, A., i, 978.

Staudinger, Hermann, and G. Lüscher, aliphatic diazo-compounds. AXIV. Organic phosphorus compounds. VI. Preparation and reactions of phosphazines, A., i, 237.

Staudinger, Hermann, and P. Meyer, ketens. XLI. Methylenecarbonic acid derivatives [ketenacetals, etc.], A. i,

1015.

Staudinger, Hermann, O. Muntwyler, and O. Kupfer, isoprene dibromide, A., i, 979.

Staudinger, Hermann, and G. Rathsam, ketens. XL. Ketenacetals, A., i, 1014. Stavritch, K. N. See Emile Cherbuliez. Steabben, Dorothy Beatty. See James Arthur Hewitt.

Stearn, Allen E., ionic equilibria of strong electrolytes, A., ii, 420.

Steel, Thos., the occurrence of calcium oxalate in the gidgee wattle (Acacia cambagei, Baker), A., i, 310.

Steele, (Miss) Ettie Stewart. See James Colguboun Irvine.

Steele, Lawrence L., abietic acid and certain metal abietates, A., i, 739.

Steele, Victor. See Thomas Martin Lowry.

Stehle, Raymond L., the gasometric estimation of urea, A., ii, 403.

Stehle, Raymond L., W. Bourne, and Henry G. Barbour, effects of ether anæsthesia alone or preceded by morphine on the alkali metabolism of the dog, A., i, 1085.

the dog, A., i, 1085.
Steibelt, Werner. See Richard Willstätter.

Steiger, A. L. von, the graphitic conception of aromatic carbon, A., ii, 616. Steinberger, Franz Karl. See Hans

Stobbe.

Steiner, Joseph. See Kurt Brand. Steiner, Pierre. See Victor Henri.

Steinkopf, Wilhelm, and Halvard Augested-Jensen, thiophen series. XIV. The condensation of diazoacetic ester with thiophen, A., i, 851.

Steinkopf, Wilhelm, and Kurt Buchheim, the action of pyrosulphuryl chloride on toluene, A., i, 122. Steinkopf, Wilhelm, Hans Donat, and Paul Jaeger, organic compounds of arsenic. VIII. Action of cyanogen bromide on tertiary arsines, A., i, 994.

Steinkopf, Wilhelm, and Julius Herold, the thiophen series. XIII. The action of acetylene on pyrites, A., i, 850.

Steinkopf, Wilhelm, and Gustav Schwen, organic compounds of arsenic. VI. Fission of alkylated or arylated arsine hydroxybromides, A., i, 71.

organic compounds of arsenic. V. Action of cyanogen bromide on phenylated tertiary arsines, A., i, 72.

organic compounds of arsenic. VII.
Additive compounds of iodoform
and salts of organic bases of tervalent elements, A., i, 118.

Steinkuhler, W. See \acute{Alfred} Schoep.

Stenger, E. See L. Lewin.

Stephen, Florence V. See Ruth E. Conway.

Stephen, Henry. See Thomas Hooker Minton.

Stephens, H. N., the Friedel and Crafts' reaction, bromophthalic anhydrides, benzene, and aluminium chloride, A., i, 141.

Stephenson, Marjory, and Margaret Dampier Whetham, fat metabolism of the Timothy grass bacillus, A., i, 500.

Stephenson, R. E., nitrification in acid soils, A., i, 416.

Stepp, Wilhelm, detection of acetaldehyde in urine, A., ii, 403.

analytical observations on the true blood-sugar value in normal and pathological individuals, A., ii, 592.

importance of dimethylhydroresorcinol for detection of volatile aldehydes in body fluids; the identification of formaldehyde in urine after administration of hexamethylenetetramine, A., ii, 793.

A., ii, 793.

Stepp, Wilhelm, and R. Feulgen, the identification of the aldelyde-like substance in the urine of diabetics as acetaldehyde, A., i, 300.

acetaldehyde as a constituent of normal urine, A., i, 495.

Stepp, Wilhelm, and Robert Fricke, a simple and exact method for the direct estimation of acetaldehyde in the presence of acetone, A., ii, 236.

Stern, Emmi. See Hartwig Franzen. Stern, (MUe) Lina. See Fred. Battelli. Steuder, Maria. See W. Klein. Steude, Max. See Alfred Lottermoser. Steudel, Hermann, histochemistry of IV. Chemical comspermatozoa. position of the spermatozoa of the shad (Clupea alosa), A., i, 294.

the nucleic acids of the spleen of cattle, A., i, 297.

Steudel, Hermann, and Sung-Sheng Chou, the estimation of purine bases

in urine, A., ii, 239.

Steudel, Hermann, and R. Freise, the origin of creatine and creatinine, A., i, 793.

the detection of vernin, A., ii, 535. Steudel, Hermann, and E. Peiser, yeastnucleic acid. II. and III., A., i, 279, 782.

nucleic acid-protein compounds, A., i, 1200.

Steudel, Hermann, and K. Suzuki, the estimation of uric acid in tissue ex-

tracts, A., ii, 538.

Stevens, F. A., and Randolph West, peptase, lipase, and invertase of hæmolytic streptococcus, A., i, 903.

Stevenson, Arnold, and Jocelyn Field
Thorpe, the formation of derivatives tetrahydronaphthalene γ-phenyl fatty acids. II., T., 1717. Stevenson, Arnold. See also George

Armand Robert Kon.

Stevenson, L_{\bullet} D_{\bullet} , comparative study of the sugar content of the spinal fluid in diseases of the nervous system, A., i, 295.

Stewart, Alfred Walter. See J. K. Marsh.

Stewart, C. P. See E. J. Morgan. Stewart, Charles R. See Leon A. Congdon.

Stewart, (Miss) Jessie, aromatic sulphonyl chlorides, T., 2555.

Stewart, John, some relations of arsenic to plant growth. I., A., i, 1221.

Stewart, John, and Edwin S. Smith, some relations of arsenic to plant growth. II., A., i, 1222.

Stewart, Lachlan Macquarie, and William Wardlaw, the oxidising and reducing properties of sulphur di-oxide. I. Mercury chlorides, T., 1481.

Steyer, Hermann. See Carl Paal.

Stieglitz, Julius, the electron theory of valency as applied to organic compounds, A., ii, 560, 705.

Stieglitz, Julius, and Ralph L. Brown, molecular rearrangement of s-bistriphenylmethylhydrazine, A., i, 778.

Stiles, Walter, penetration of electrolytes into gels. IV. Diffusion of sulphates, A., ii, 125.

Stiles, Walter, and Gilbert Smithson Adair, penetration of electrolytes into gels. III. Influence of the concentration of the gel on the coefficient of diffusion of sodium chloride, A., ii,

Stix, Walter. See Walter Fuchs. Stobbe, Hans, and Franz Karl Steinberger, photo-reactions of the trans-

and cis-cinnamic acids, A., i, 1018. Stock, Alfred, carbon and its neighbours in the periodic system, A., ii, 564.

Stock, Heinrich. See Robert Schwarz. Stockings, W. E. See William Arthur Bone.

Stoddard, R. B. See IV. G. Ungerer. Stöckigt, Fritz. See Emil Heuser.

Stoermer, Richard, and F. Bachér, configuration of the truxinic and truxillic acids. VI., A., i, 830.
Stoermer, Richard, and H. Oehlert,

stereoisomeric derivatives of stilbene, A., i, 647.

Stoermer, Richard, and E. Robert, behaviour of crotonic acid in ultra-violet light. II., A., i, 519. Stoklasa, Julius, influence of selenium

and radium on the germination of seeds, A., i, 613.

influence of selenium on plant evolution in the presence or absence of

radioactivity, A., i, 614. Stoklasa, Julius [with J. Chmelař, V. Jánský, P. Křička, J. Pěnkava, and J. Zelenka, action of selenium on the metabolism of plants in presence of the radioactivity of air and of soil, A., i, 974.

Stoklasa, Julius [with J. Sebor, F. Tymich, and J. Cwacha], the resorption of aluminium ions by the roots of plants, A., i, 502.

Stoll, A. See Karl Spiro.

Stoll, P. See Paul Scherrer.

Stollé, Robert, addition of hydrazoic acid to derivatives of carbodi-imide, A., i, 689.

preparation of N-substituted 3-dihalogenoxindoles, A., i, 762.

Stollé, Robert, and A. Netz, the reaction of benzylidenebenzhydrazide chloride and dibenzhydrazide chloride with sodium azide, A., i, 690.

Stollenwerk, Wilhelm. See Wilhelm Biltz.

Stone, Hosmer W. See Victor Lenher. Storm, Einar. See Heinrich Goldschmidt.

Stosius, Karl, the condensation of methyl & naphthol-3-carboxylate with methyl n-opianate, A., i, 746.

Stott, Verney, pipettes, A., ii, 388.

Stratton, (Mrs) K., and James Riddick Partington, latent heats of fusion. I. Benzophenone, phenol, and sulphur, A., ii, 258.

Straus, Fritz, and Amadaus Dützmann, dibenzylidencacetone [distyryl ketone] and triphenylmethane. X. Ionogenically linked halogen atoms, A., i, 148.

Strauss, David. See Elektrochemische Werke G. m. b. H.

Strauss, Hermann, and Wolfgang Schubardt, cholesterol content of bloodserum, A., i. 1209.

Strecker, Wilhelm, and Max Baltes, action of ozone on aliphatic and aromatic substitution products of ammonia, A., i, 14.

Strecker, Wilhelm, and Ernst Kannappel, estimation of boric acid, A., ii, 784.

Streel, (Mile) du Vivier de. Fauré-Fremiet.

Strickler, Alvin, and Joseph Howard Mathews, electric endosmose, A., ii,

Strisower, Rudolph, total nitrogen and residual nitrogen content of ædematous fluids, A., i, 964.

Stroh, Rudolf. See Rudolf Friedrich Weinland.

Strohmenger, Ludwig. See Stefan Goldschmidt.

Struwe, F. See Willy Marckwald.

Strzelba, Hubert. See Robert Kremann. Stuber, B., and A. Funck, blood clotting. IV., A., i, 393.

Stuckert, Guillermo V., considerations on the solubility of the phosphatides, A., i, 1089.

Stübel, H., microchemical recognition of urea in the kidney by means of xanthydrol, A., i, 397.

Stuhlman, Otto, jun., the photoelectric long wave-length limit of platinum and silver, A., ii, 809.

Stumper, Robert, new observations on the venom of ants, A., i, 400.

Sturzenegger, P. See W. D. Treadwell.

Subrahmanyam, G. See A. L. Narayan. Sudborough, John Joseph, and D. D. Karvé, studies in acidolysis. I. The equilibrium between acetic acid, trichloroacetic acid, and their ethyl esters. II. The equilibrium between acetic acid, trichloroacetic acid, and their methyl esters, A., ii, 749.

Sudborough, John Joseph, and R. C. Shah, influence of s. trinitrobenzene on reactions in which arylamines are

involved, A., ii, 757.

Sugden, Samuel, the determination of surface tension from the maximum pressure in bubbles, T., 858.

Sugiura, Y. See H. Nagaoka. Sullivan, F. W., jun. Se See Moses Gomberg.

Sundberg, Thure, sensitiveness of certain tests for hydrocyanic acid, A., ii, 404.

Supplee, G. C., and B. Bellis, citric acid content of milk and milk products, A., i, 197.

Suschnig, Eugen, rubidium (cæsium) silver gold bromides, A., ii, 514.

Suszko, J. See Karol Dziewoński.

Suter, Richard. See Franz Fichter. Suydam, J. R., jun. See Joaq See Joaquin Enrique Zanetti.

Suzuki, K. See Hermann Steudel.

Suzuki, Umetarô, and Yoshihiko Matsuyama, succinic acid, A., i, 716.

Suzuki, Yoshitarô, and Sankyô Kabushiki Kaisha, preparation of aromatic esters in the presence of an organic base, A., i, 543.

Svanberg, Olof, K. Sjöberg, and G. Zimmerlund, the iodometric microestimation of phosphoric acid, and of phosphorus in organic compounds, A., ii, 867.

Svanberg, Olof. See also Hans von Euler, and Karl Freudenberg.

Svance. See Georg Schroeter. Svensson, John. See Alfred Bjure.

Swan, Enoch. See Fred Fairbrother. Swan, W. O. See Graham Edgar.

Swarts, Frédéric, some aliphatic fluorides, A., i, 101.

Sweet, S. S. See Samuel Edward Sheppard.

Swientoslawski, Wojciech, Eisenlohr's refractometric constants, A., ii,

physical properties of vapour-liquid systems. I. and II., A., ii, 192.

divergences of the value of the mechanical equivalent of heat, A., ii, 194.

new data in the thermochemistry of organic substances, A., ii, 195.

proposal for the fixing of a unit of measurement in thermochemistry, A., ii, 548.

Swientoslawski, Wojciech, and (Mlle)
H. Starczewska, the heat of combustion of benzoic acid, cane-sugar, and naphthalene, A., ii, 616.

Swisher, Margaret. See John Bernard

Swoboda, Frederick K., nitrogen nutrition of yeast, A., i, 795.

Syniewski, Wiktor, oxidation of amylodextrin, A., i, 1120.

Syrkin, Ja. K., equilibrium in heterogeneous systems, A., ii, 699.

theory of solvates, A., ii, 823.

Syrkin, Ja. K. See also P. P. Budnikov. See Fritz von Szamák, Nikolaus. Konek.

Szányi, W. See Fritz Verzár.

Szappanyos, B. See Z. Ernst. Szilard, Béla, the direct estimation of small quantities of radium by the penetrating rays, A., ii, 586.

T.

Tacke, Ida. See David Holde.
Tadokoro, Tetsutaro, ultra-violet spectroscopical studies on the antagonistic action of salts in organic colloidal solution, A., ii, 204.

spectrochemical reaction of methylfurfuraldehyde and hydroxymethylfurfuraldehyde phloroglucides, A., ii, 236.

Taffel, Alan, thermal expansion of gelatin gels, T., 1971.

Taggart, Grace C. See Frank A. Csonka.

Tahara, Yoshihide. See Riko Majima. Taistra, Sophia A., animal calorimetry.

XIX. The influence of acids on the carbon dioxide-combining power of the blood plasma, A., i, 288.

Takahashi, Katsumi, fatty matters in the sea urchin, A., i, 609. nutritive value of fats and lipoids. I.,

A., i, 699. fatty matter in "herring roe," A., i, 700.

Takahashi, Torizô. See Heisaburû Kondô.

Takahashi, Yutaka, the origin of band spectra, A., ii, 3.

Takashima, Norikazu. See Hidckichi Yanagisawa.

Takata, Maki, gastric juice. III. Juice from the empty stomach, A., i,

estimation of pepsin, A., ii, 886.

Takayama, Gitaro. See Riko Majima. Takeda, Jirô, and Sajûrô Kuroda, new method for the preparation of alka-

mines. II., A., i, 272.

Takei, Takeo, the analysis of a volume curve of blood-corpuscles in hypertonic solutions, which renders possible the simultaneous differentiation of osmotic colloido-chemical changes in

volume, A., i, 289.
Tamada, Keisuke. See Riko Majima.

CXXII. ii.

Tamaru, Setsuro. See Theodore William Richards.

Tamburello, A. See Anne Wilhelm van der Haar.

Tammann, Gustav, the chemical behaviour of crystallised binary compounds with one component nobler

than hydrogen, A., ii, 63. the reaction limit of chemical agents on copper-gold alloys and their galvanic tension, A., ii, 75.

electro-chemical behaviour of metallic conducting compounds, A., ii, 255. the substance between the crystallites of metallic substances, A., ii, 502.

the rate of formation of some nitrides, A., ii, 852.

Tammann, Gustav, and W. Jander, the behaviour of two metals towards one another when dissolved in mercury,

A., ii, 825. Tammann, Gustav, and W. Köster, the velocity of the action of oxygen, hydrogen sulphide, and the halogens on metals, A., ii, 831.

Tammann, Gustav, and K. Schönert, the diffusion of carbon in metals and in

mixed crystals of iron, A., ii, 772. Tammann, Gustav, and E. Vaders, the electrochemical behaviour of alloys of manganese with copper, nickel, cobalt, and iron, A., ii, 380.

Tammann, Gustav. See also Rudolf Vogel.

Tanaka, Shinsuke. See Usaburo Yoshida.

Tanberg, Arthur Percival, and Herbert Winkel (E. J. du Pont de Nemours & Co.), preparation of symmetrical tetra-substituted carbamides, A., i, 1009.

Tanner, W. F. See H. S. Uhler.
Tanner, W. F. See Joseph Goldberger. Tanret, Georges, the chemical composition of the ergot of diss and of the ergot of oats, A., i, 504.

Tapernoux, A. See Ch. Porcher.

Tartar, Herman V., and Zalia Jencks Gailey, rôle of the hydrogen-ion concentration in the precipitation of colloids, A., ii, 829.

Tartar, Herman V., and Harmon E. Keyes, electrical conductivity of zinc sulphate solutions in the presence of sulphuric acid, A., ii, 186.

measurement of overvoltage, A., ii, 343.

Tarugi, N., toxicology of arsenic, A., ii,

separation of phosphoric acid in qualitative analysis, A., ii, 784.

Tashiro, Shiro. See Olive P. Lee. See Yūtaka Kinu-Tatsuno, Hisajirô. gasa.

Taylor, F. A. See Phxbus A. Levene. Taylor, Frank E. See Aldo Castel-

Taylor, Guy B., and George Augustus Hulett, catalytic decomposition of certain oxides, A., ii, 646.

Taylor, Guy B. See also William C.

Sproesser.

Taylor, Henry Austin, and William Cudmore McCullagh Lewis, studies in catalysis. XV. Absorption spectra of triethylsulphonium bromide in various solvents, in the short infra-red region, T., 665.

Taylor, Hugh Stott, and William Theodore Anderson, jun., heat of formation

of silver iodide, A., ii, 121.

Taylor, Hugh Stott, and Harrey A. Neville, catalysis in the interaction of carbon with steam and with carbon dioxide, A., ii, 143.

Taylor, Hugh Stott. See also Robert N.

Pease.

Taylor, John, the interaction of aldehydes or ketones and thiocarbamides in the presence of acids, T., 2269.

Taylor, L. S. See P. P. Cioffi.
Taylor, (Miss) Millicent. See Oriel Joyce Flecker, and James William McBain.

Taylor, M. C., and C. A. Gammal, estimation of free chlorine and hypochlorous acid in concentrated salt solutions, A., ii, 581.

Taylor, M. C., W. A. Gersdorff, and E. J. Tovrea, electrolytic reduction of chromic chloride to the bivalent state,

A., ii, 382.

Taylor, Thomas Weston Johns, radiation and chemical action, A., ii, 336.

Taylor, Thomas Weston Johns. See also Nevil Vincent Sidgwick.

Taylor, William, the non-protein nitrogen in goat's milk, A., i, 1213.

Teleczky, J. See Ernst Winterstein.

Tennenbaum, M. See C. van Eweyk. Terrill, Edwin H., the colorimetric estimation of hæmoglobin with especial reference to the production of stable standards, A., ii, 799. Terroine, Emile F., and René Wurmser,

the energy yield in the growth of

Aspergillus niger, A., i. 706. Terroine, Emile F., René Wurmser, and J. Montané, the influence of the constitution of nutritive media on the composition of Aspergillus niger, A., i, 1220.

Tervaert, D. G. Cohen, some new observations on the relation between the true sugar content of urine and the sugar content of blood, A., i, 1215.

new methods of blood sugar estimation; estimation of the true sugar content of urine, A., ii, 166.

Teschendorf, Werner, the action of organic kations on the vascular system and its modification by inorganic ions, A., i, 90.

physiology and pharmacology of the leech, Hirudo medicinalis, A., i, 970.

Tetralin, G. m. b. H., preparation of artetrahydronaphthylthiolacetic acids, A., j, 340.

preparation of hydrogenated anthraquinones, A., i, 1039.

Tetralin, G. m. b. H. See also Georg Schroeter.

Tezner, Otto, and Max Turolt, the action of potassium and calcium ions on the surviving human stomach, A., i, 396.

Thannhauser, Siegfried J., and E. Andersen, estimation of bilirubin in human serum; the Ehrlich-Pröscher reaction, A., ii, 671.

Theberath, H. See Adolf Sieverts.

Theis, R. C., and Stanley Rossiter Benedict, distribution of uric acid in the blood, A., i, 82.

Thelen, Richard. See Ernst Philippi. Thiel, Alfred, mechanism of the colour change of some phthaleins, A., i, 455.

disglomeration and formation of the autogenous lead tree, A., ii, 63.

the state of carbonic acid in aqueous solution, A., ii, 374.

the thermochemistry of carbon compounds, A., ii, 819.

Thiel, Alfred, and Fr. Müller, chloroand bromo-derivatives of phenolphthalein, A., i, 659.

Thiel, E. van, influence of the catalyst on the thermodynamic quantities regulating the velocity of a reaction, A., ii, 754.

Thielepape, Ernst, extension of the Kishner-Wolff method of reduction. I., A., i, 271.

the quinoline series. I. Synthesis of 4-substituted quinolines and of quinoline-4-carboxylic acids, A., i, 271.

Thielepape, Ernst, and Otto Spreckelsen, extension of the Kishner-Wolff method of reduction, II., A., i, 1191.

Thieme, Hans, trypaflavin [3:6-diamino-1-methylacridinium chloride], A., i,

Thierfelder, Hans, constitution of glutamine, A., i, 326.

Thiery, application of Folin and Denis's phosphotungstic reaction to the estimation of uric acid in urine, A., ii, 238.

Thiéry. See also Rouzaud. Thivolle, L. See G. Fontès.

Thole, Ferdinand Bernard. See Albert Ernest Dunstan.

Tholin, Th., the thermostability of the co-enzyme and its separation from vitamin-B from yeast, A., i, 305.

Thomann, H. See Paul Karrer. Thomas, Arthur W., and Margaret W. Kelly, the isoelectric point of collagen, A., i, 387.

Thomas, Arthur W. See also Francisco A. Quisumbing

Thomas, Clifford Dane. See Oscar Liste Brady.

Thomas, F. See Douglas Frank Twiss.

Thomas, Fritz. See Otto Ruff.
Thomas, John, Arthur Hugh Davies, and Scottish Dyes, Ltd., production of dyestuff intermediates [aminoanthraquinones], A., i, 260.

Thomas, K., decomposition of proteins of organs, A., i, 790.

Thomas, Pierre, and Georges Carpentier. a very sensitive reagent for copper; the Kastle-Meyer reagent, A., ii, 86.

Thomas, Richard, vapour pressures of dilute alcohol solutions, A., ii, 321.

Thomas, Ruth.See Forris Jewitt Moore.

Thomas, V., mixed organometallic compound of aluminium, A., i, 330.

Thomas, Walter. See Claude IV. Bour-

Thomas, William. See Eric Keightley Rideal.

Thompson, F. P. See Edmund Knecht. Thompson, Gartha. See William Bay*ley* Parker.

Thompson, Hugh Vernon. See Francis Herbert Clews.

Thompson, Ruth. See Frank Burnett

Thompson, T. J. See Fred W. Upson. Thomson, G. P., anode rays of glucinum, A., ii, 106.

Thomson, (Sir) Joseph John, application of the electron theory of chemistry to solids, A., ii, 355.

the analysis by positive rays of the heavier constituents of the atmosphere; of the gases in a vessel in which radium chloride had been stored for thirteen years, and of gases given off by deflagrated metals, A., ii, 565.

an electron theory of solids, A., ii, 745.

Thorne, Percy Cyril Lesley, colloidal solutions of carbon in water, A., ii, 695.

Thornton, William M., jun., tervalent II. Estimation of copper titanium. and iron in the presence of each other, A., ii, 528.

Thorpe, Jocelyn Field. See Oscar Becker, Stanley Francis Birch, Juan Pedige Charles Chandrasena, Shankar Shridhar Deshapande, Frank Dickens, Ernest Harold Farmer, Biraj Mohan Gupta, Christopher Kelk Ingold, George Armand Robert Kon, and Arnold Stevenson.

Thorvaldson, Thorbergur. See Theodore William Richards.

Thunberg, Torsten, is there a genetic relation between the oxygen inhaled and the oxygen of the exhaled carbon dioxide ! A., i, 889.

Thyssen, H. See G. Batta.

Tian, A., slow hydrolysis of salts, A., ii, 362.

Tichomirov, P. See G. Povarnin.

Tideswell, Frederick Vincent, and Richard Vernon Wheeler, on dopplerite; studies in the composition of coal, T., 2345.

Tiebackx, F. W., the colloids arabic acid and arabic acid plus gelatin, A., i, 638.

is the gelatin-gum arabic coagulation a chemical or a colloid-chemical process? A., ii, 698.

Tiede, Erich, and Friedrich Richter, inorganic luminescence phenomena. IV. Preparation of pure magnesium sulphide and its phosphorescence. II. Phosphorescent magnesium sulphides, A., ii, 215.

preparation of phosphorescent magnesium sulphide, A., ii, 247.

Tiede, Erich, and Arthur Schleede, the rare-earth magnesium sulphide phosphors, A., ii, 769.

Tiede, Erich, and Peter Wulff, hydrates of boron trioxide as a constituent of systems capable of strong phosphorescence and containing organic compounds, A., ii, 245.

Tiede, Erich, Peter Wulff, and A. Ragoss, hydrated boric acid as the basis of systems capable of [showing] a high phosphorescence, A., ii, 8.

Tiemann, Fr., new theory of the constitution of hydroxides, particularly those of the basic metallic oxides, A., ii, 53.

Tiffeneau, Marc, and M. Porcher, semipinacolic transposition in the benzylcyclohexene series; migration of the benzene radicle, A., i, 537.

Tiffeneau, Marc. See also Paul Carnot, and Alex. Orékhoff.

Tiger, R., and H. Simonnet, variations in the amylolytic activity of the pancreas and liver in avian polyneuritis, A., i, 195.
Tigges, H. See Paul Jacobsen.
Tilley, C. E., density, refractivity, and

composition relations of some natural glasses, A., ii, 220.

Timmermans, Jean, theory of concentrated solutions; separation of solids from organic mixtures, A., ii, 25.

the mutual solubility of liquids at high pressures, A., ii, 482.

Timmermans, Jean, (Mlle) H. van der Horst, and Heike Kamerlingh Onnes, the freezing points of pure organic liquids as thermometric constants at temperatures below 0°, A., ii, 258.

Timmis, Laurence Barnett. See Frank

Lee Pyman.

Tingey, Harold Calvert, and Cyril Norman Hinshelwood, the catalytic decomposition of formic acid on surfaces

of platinum and silver, T., 1668.

Tingle, Alfred, alleged adsorption of alumina from aluminium sulphate solutions by cellulose, A., i, 434.

Tischenko, Georg von. See Hermann Plauson.

Tisdall, Frederick F., influence of the sodium-ion in the production of tetany, A., i, 1216.

a rapid colorimetric method for the estimation of the inorganic phosphorus in small amounts of serum, A., ii, 392.

Tisdall, Frederick F. See also Benjamin Kramer.

Titley, Alan Francis. See William Henry Perkin, jun.

Titov, V. S., partition of chlorine between water and a gaseous phase, A.,

Tobler, Richard. See Hans Eduard Fierz. Tocher, J. F., the citric solubility of

mineral phosphates, A., ii, 525. Tochinai, Yoshihiko, the food relations

of Fusarium lini, A., i, 207.

Shigeru, equilibrium in system potassium chlorate, potassium nitrate, and water at 25°, A., ii, 748.

oxychlorides of mercury; equilibrium in the system mercuric chloride, vellow mercuric oxide, and water at

35°, A., ii, 769.

Tokuoka, E., and K. Ogasawara, quantity of combined carbonic acid in cerebrospinal fluid, A., i, 895.

Tokyo Industrial Laboratory. See Shuichirô Ochi.

Tolman, Richard C., entropy of electron gas, A., ii, 18.

thermal ionisation of metallic vapours, A., ii, 18.

relation between statistical mechanics and thermodynamics, A., ii, 257.

thermodynamic treatment of the possible formation of helium from hydrogen, A., ii, 738.

Tomaschek, Rudolf, boric acid phosphors, A., ii, 763.

Tomiček, Oldřich, some derivatives of indolinone, A., i, 679.

Tomita, Masaji, the behaviour of inactive malic acid in the organisms of the dog and rabbit, A., i, 301.

decomposition of d-galactose the according to the second mode of fermentation, A., i, 307.

phosphatases. I. and II., A., i, 960. the influence of thyroxin on alcoholic fermentation, A., i, 972.

Tomula, E. S., antimonic acid and the use of sodium antimonate in analysis, A., ii, 74.

Topley, B. See Cyril Norman Hinshelwood.

Toporescu, E_{\cdot} , the preparation of sodium hydrogen carbonate, A., ii, 375, 642.

Torelli, G. See Gino Scagliarini. Tosterud, Martin. See Victor Lenher.

Tourrou, R. See Georges Deniges. Tovrea, E. J. See M. C. Taylor.

Tower, Olin Freeman, and Martha C. Cooke, preparation of colloidal solutions of nickel and cobalt hydroxides and some other compounds of these metals, A., ii, 853.

Town, George G. See Victor Lenher. Townsend, Eric B. See Duncan A. MacInnes.

Townsend, John S., and V. A. Bailey, motion of electrons in gases, A., ii,

motion of electrons in atoms, A., ii,

the abnormally long free paths of electrons in argon, A., ii, 494.

motions of electrons in argon and hydrogen, A., ii, 836.

Toyama, Yoshiyuki, unsaponifiable constituents (higher alcohols) of shark and rayfish liver oils. II., A., i, 895.

derivatives of behenic and erucic acids, A., i, 1111. composition of the fatty acids of rale

oil, A., i, 1113.

Toyama, Yoshiyuki. See also Mitsumaru Tsujimoto.

Traetta-Mosca, F., and M. Preti, action of Aspergillus glaucus on glycerol, A., i, 91.

Trampler, (Mlle) A. See Emil Briner. Traube, Isidor, PH again, A., i, 204.

a new viscostalagmometer for the estimation of surface tension and viscosity of liquids of very different limpidity, A., ii, 122.

Traube, Isidor, and Paul Klein, the theory of narcosis, A., i, 198.

submicrons visible in the Tyndall cone to the naked eye, A., ii, 201.

Traube, Isidor, and R. Somogyi, theory of disinfection, A., i, 204.

Wilhelm, alkaline Traube, copper hydroxide solutions and copper oxideammine-cellulose solutions. I. and II., A., i, 115, 718.

Tranbenberg, Heinrich Rausch von, and K. Philipp, passage of α -rays through

materials, A., ii, 12.

Otto, Traun, H. Forschungslaboratorium, preparation of diolefines and polymerisation products thereof, A., i, 514.

preparation of diolefines and deriva-tives thereof, A., i, 515.

preparation of vinyl compounds and polymerisation products thereof, A., i, 516.

preparation of vinyl haloids, A., i,

preparation of vinyl sulphuric acid and homologues thereof, A., i, 517.

preparation of formaldehyde and methyl alcohol, A., i, 522.

preparation of hexamethylenetetramine and formaldehyde, A., i, 528.

Traun, Max. See Hugo Weil.

Trautz, Max, and Walter Seidel, the luminescence of decomposing ozone, A., ii, 730.

Trautz, Max, and Walter Stäckel, the decomposition of chlorine into atoms, A., ii, 760.

Trautz, Max, and Karl Winkler, preparation of propylene in a pure condition, A., i, 909.

preparation of cyclopropane in a pure

condition, A., i, 926. problems of organic chemistry. The velocity of ring fission in gases; isomerisation of cyclopropane, A., i, 926.

Traxler, Ralph N. See Frank E. E. Germann.

Treadwell, W. D., formulæ for the solubility of certain salts in aqueous ethyl alcohol and water, A., ii, 31.

Treadwell, W. D. [with M. Blumenthal, A. Bossi, Max Dreifuss, M. Hooft, and M. Stärkle], reductions with cadmium in volumetric analysis. II., A., ii, 788.

Treadwell, W. D. [with R. F. Edelmann, A. Freuler, P. Hristie, L. Egger, P. Sturzenegger, and A. Weber], reductions with cadmium and lead in volumetric analysis. III., A., ii, 780.

Treadwell, W. D. [with Ch. Mussler], the solubility of arsenic trichloride in concentrated hydrochloric acid at 100°, A., ii, 763.

Treadwell, W. D., and D. Chervet, the

influence of the alkalis on the titration of some metals with ferrocyanide, A., ii, 786.

Trewendt, Gert. See Arthur Rosenheim. Trifonov, Iv., properties and structure of pernitric acid, A., ii, 845. pernitric acid as an analytical reagent,

A., ii, 883.

Trimble, H. M., solubility of potassium permanganate in solutions of potassium sulphate and sodium sulphate, A., ii, 374.

Tröger, Julius, and Fr. Bolte, synthesis of a-benzopyrone derivatives and the rupture of the pyrone ring in these compounds, A., i, 267.

Tröger, Julius, and W. Menzel, synthesis of 8-arylsulphonylquinolines containing a side chain in the 2position, A., i, 269.

Troger, Julius, and K. Schwarzenberg, a new base from the residues of the hydrolytic products of cocaine, isomeric with tropine and ψ -tropine, A., i, 167.

Troise, Antonio, a cause of error in the application of the colour test for acetone, A., ii, 595.

Troitzki. See Alexander Kiesel.
Tromp, S. T. J., specific characters of hydrolytic decomposition, A., ii, 476. Tropsch, Hans, and A. Kreutzer, the

acids of montan wax, A., i, 317, 804.

Trümpler, G., electromotive behaviour of nietallic compounds with electron conductivity, A., ii, 110.

Tsang, Chuk Yee. See Duane Englis.

Tschelnitz, Erich. See Ernst Späth. Tschenscher, F. See Fritz Arndt.

Tschirsch, E., [estimation of] vanillin, A., ii, 403.

Tschitschibabin, Alexei E., and J. S. Bylinkin, the products of the benzoylation of 2-aminopyridine, A., i, 573.

Tschudy, Edward A., effect of variation in weight of the riders and plummets of the Westphal balance upon the accuracy of specific gravity determinations, A., ii, 820.

Tschugaev, Leo Alexandrovitsch, and N. K. Pschenicyn, complex platinum compounds. III. Molecular rearrangements observed with complex platinum compounds, A., ii, 856.

Tschugaev, Leo Alexandrovitsch, and N. A. Vladimirov, variation of the electrical conductivity among the ammoniacal derivatives of platinous nitrite, A., ii, 814.

njimoto, *Mitsumaru*, clupanodonic acid, A., i, 917. Tsujimoto,

Tsujimoto, Mitsumaru, and Yoshiyuki Toyama, higher alcohols in the unsaponifiable matter from shark and ray-fish liver oils, A., i, 297.

Tsukamoto. Takeo. See**Ya**suhiko

Asahina.

Tsukiye, Sogen, preparation and properties of vitamin-B, A., i, 974.

Tubandt, Carl, and Gerhard Eschenhagen, behaviour of the photo-haloids in a direct electric current, A., ii, 346.

Tucker, Stanley Horwood. See Hemendra

Kumar Sen-Gupta.

Turban, Karl, comparative investigations on the blood sugar content of the arterial and venous vascular systems, A., i, 482.

Turina, Božo, action of selenium, sulphur, and tellurium salts on plants, A., i,

707.

Turner, Eustace Ebenezer, the action of cupric chloride on organometallic derivatives of magnesium, A., i,

Turner, Eustace Ebenezer, and F. H. H. Wilson, decomposition of methyl oxalate by acetic acid, A., i, 916.

Turner, Eustace Ebenezer. See also George Joseph Burrows.

Turner, Sydney Leonard. See Nevil

Vincent Sidgwick.

Turner, William Ernest Stephen, critical examination of methods commonly used in determining the durability of glass, A., ii, 719.

Turner, William Ernest Stephen, and T. E. Wilson, action of various analytical reagents on chemical glassware,

A., ii, 501.

Turner, William Ernest Stephen. also A. Cousen, and Violet Dimbleby.

Turolt, Max. See Otto Tezner. Tussenbroek, M. J. van. S See Hein Israel Waterman.

Tutton, Alfred Edwin Howard, monoclinic double selenates of the cadmium group, A., ii, 502.

monoclinic double selenates of the manganese group, A., ii, 505.

Twiss, Douglas Frank, Sidney Albert Brazier, and F. Thomas, the dithiocarbamate accelerators of vulcanisation, A., i, 460.
Týmich, F. See Julius Stoklasa.

U.

Uemura, Taku. See Vaji Shibata. Ueno, Seiichi, promoters of the hydro-

genation of oils. I., A., i, 983. Uhler, H. S., and J. W. Tanch, the arc spectra of gallium and indium, A., ii,

Ullmann, Alfred, tyramine (p-hydroxyphenylethylamine) as $_{
m the}$ principle of the drug Semina cardui Mariæ, A., i, 616.

Ullmann, Fritz. See Anne Marie von

dem Knesebeck.

Ulpts, Reinhold. See Max Bergmann. Ultée, A. J., identity of xanthosterol with lupeol, A., i, 826.

stearic acid in the latex of Ficus fulva,

Reinw, A., i, 1100.

Underhill, Frank Pell. See Erwin G. Gross.

Ungerer, Ernst, determination of the size of particles; attempts to explain the formation of layers in clay turbidities and their use in soil analysis, A., ii, 96.

Ungerer, W. G., and R. B. Stoddard, odour value analysis, A., i,

Upson, Fred W., and Lila Sands, the decomposition of amines in the vapour stage, A., i, 1121. Upson, Fred W., and T. J. Thompson,

the preparation and properties of several phenylalkylsuccinic acids, A., i, 343.

Urasov, G. See Nicolai S. Kurnakov. Urbain, Georges, the atomic numbers of neo-ytterbium, lutecium, and celtium, A., ii, 505.

Urbain, Georges. See also Ch. Boulanger,

and Pierre Urbain.

Urbain, Pierre, and Georges Urbain, extraction and purification of scandium from thorveitite from Madagascar, A., ii, 504.

Urbasch, Stefan, the volumetric and gravimetric estimation of zinc, A., ii, 317.

Usherwood, (Miss) Edith Hilda, tautomerism of dyads. I. Detection of tautomeric equilibria in hydrocyanic acid, T., 1604.

Usherwood, (Miss) Edith Hilda. also Christopher Kelk Ingold.

Utz, Franz, [detection of bile pigments in] gastric juice, A., ii, 799. analysis of blood, A., ii, 800.

Uyeda, Yoshisuke. See Arthur George Perkin.

Uytenbogaart, jun., electrically heated apparatus for the determination of melting points, A., ii, 471.

V.

Vacher, F. See Jh. Martinet.

Vaders, E. See Gustav Tammann. Vaillant, E., rapid estimation of uric

acid in urine, A., ii, 668. Vaillant, Pierre, variations in the conductivity of solid electrolytes, A., ii,

Valeras, F. Pablo, the Neuburger nuclear

model, A., ii, 702. Vallance, Reece Henry, the solubility of potassium ferrocyanide, A., i, 724.

See also John Vallance, Reece Henry. Albert Newton Friend.

Vallée, C., and M. Polonowski, microchemical estimation of nitrogen, A., ii, 312. micro-estimation of albumin, A., ii,

406.

Vallot, J., the measurement of the influence of heat and light on the activity of reduction of animal tissues, and applications to heliotherapy, A., i, 87.

Valteich, H. W., and C. C. Glover, estimation of pepsin, A., ii, 406.

Vandevelde, Albert Jacques Joseph, combined action of enzymes, A., i, 958. Vangindertaelen, A. See Henri Wuyts. Varenkamp, Otto. See Bruno Emmert. Vaubel, Wilhelm, gravimetric estimation of nickel as nickel dioxide, A., ii, 875.

Vavilov, S. I., dependence of the intensity of the fluorescence of dyes on the wave-length of the exciting light, A., ii, 181.

Vavon, Gustave, and A. L. Berton, the borneol obtained from the magnesium compound of pinene hydrochloride, A., i, 943.

Vavon, Gustave, and A. Husson, catalysis by platinum black, A., ii, 631.

Vecchiotti, Luigi, action of mercuric acetate on certain aminoazo-compounds, A., i, 478.

Vecchiotti, Luigi. See also Riccardo Ciusa.

Vegard, L., the structure of the isomorphous group, Pb(NO₃)₂, Ba(NO₃)₂, $Sr(NO_3)_2$, $Ca(NO_3)_2$, A., ii, 503.

Veidt, Maximilian. See Alfred Schaarschmidt.

Velisek, J. See Jiri Baborovsky.

Venable, Francis P., and D. H. Jackson, chlorination by mixed carbon monoxide and chlorine, A., ii, 73.

Venable, Francis P., and R. A. Lineberry, zirconyl citrate, A., i, 917.

Venable, Francis P., and E. O. Moehlmann, zirconium ferrocyanide and ferricyanide, A., ii, 712.

Venkateswaran, Ramavenkatasubba, the molecular scattering of n-pentane, T., 2655. Vérain, M. See G. Etienne. of light

Vereinigte Chemische Werke, Akt.-Ges., preparation of glycerol from sugar, A., i, 980.

Vereinigte Chininfabriken Zimmer & Co., preparation of O-alkyl derivatives of hydrocupreine, A., i, 948.

Vergelot, Charles, application Bourquelot's biochemical method to some members of the Caryophyllacere and Papilionacea, A., i, 207.

Verkade, P. E., glutaconic acid. A., i, 520.

calorimetric determinations, A., ii, 740.

Verkade, P. E., J. Coops, jun., and H.Hartman, calorimetric researches: (1) The standardisation of a calorimetric system; comparison of the heats of combustion of the substances used for standardisation: benzoic acid and naphthalene, A., ii, 474.

Vermast, P. G. F., theory of disinfection in the light of the Meyer-Overton lipoid theory, A., i, 406.

Vermeylen, G. See André Wahl.

Vernadsky, Wladimir J., the decomposition of kaolin by organisms, A., i, 1096.

Vernet, Henry. See Amé Pictet.

Verzár, Fritz, J. Bögel, and W. Szányi, tension and extensibility of muscle during contraction by acids or chemical means, A., i, 1212.

Verzár, Fritz, and W. Szányi, the replaceability of potassium by uranium in cross-striped muscle, A., i, 1213.

Veselý, V., and K. Dvořák, the replacement of diazo-groups by nitro groups, A., i, 690.

Vesterberg, K. Albert, chemistry of terpenes, phytosterols, and resins. Extraction of amyrin, A., i, 825.

Vesterberg, K. Albert, and S. Westerlind, chemistry of terpenes, phytosterols, and resins. II. Separation of α - and β -amyrin; preparation of α amyrilene, A., i, 825.

Vèzes, Maurice, and Georges Dupont, the composition of the essential oil of turpentine, A., i, 1043.

Viale, G., the presence of amino-acids in milk, A., i, 898.

Vickery, Hubert Bradford, rate of hydrolysis of wheat gliadin, A., ii,

Viehover, Arno. See CarlOscarJohns.

Vignat. See Alphonse Sevewetz.

Vila, Antony. See Maurice Piettre. Vila, M., the separation of the globulins

of horse's serum, A., i, 1209. Vilbrandt, Frank C. See S. Lantz

Shenefield. Villedieu, G., and (Mme) G. Villedieu,

copper sprays, A., i, 415. Villedieu, (Mme) G. See G. Villedieu.

Viola, S. See G. Charrier. Violle, P. L., periodicity in chloride excretion during dropsical nephritis, A., i, 968.

Vischniac, Ch. See A. Goris.

Visco, Sabato, alcohol-soluble protein of the caryopsis of Sorghum vulgare. Extraction and identification, A., i,

Vladesco, R. See Gabriel Bertrand.

Vladimirov, N. A. See Leo Alexandrovitsch Tschugaev.

Vleck, J. H. van, the normal helium atom and the quantum theory, A., ii,

Vliet, Elmer B. See E. H. Volwiler. Vloten, W. J. van Bommel van. See J. Snapper.

Vodret, F. L. See Ernesto Puxeddu. Vogel, and E. Weber, effect of nitro-

genous fertilisers on the alkaloid content of lupines, A., i, 798.

Vogel, Erwin. See Benjamin Max Margosches.

Vogel, Hans, investigations on potassium paralysis. A., i, 196.

Vogel, Heinz. See Robert Wintgen.

Vogel, Robert, and A. Bornstein, paradoxical behaviour of the sugar metabolism on simultaneous administration of pilocarpine and adrenaline ("dissimilatory reversal"), 395.

Vogel, Robert. See also A. Bornstein. Vogel, Rudolf, and Gustav Tammann, the ternary system iron-boron-carbon, A., ii, 852.

Vogelenzang, E. H. See I. M. Kolthoff.

Vogt, Richard R., and Julius A. Nieuwland, the rôle of mercury salts in the catalytic transformation of acetylene into acetaldehyde and a new commercial process for the manufacture of paracetaldehyde, A., i, 110.

Voigt, Arthur. See Wilhelm Biltz. Voigt, Walter, German silver, A., ii, 295.

Vois, R. See Riccardo Ciusa.

Voit, Kurt, formaldehyde in the urine after administration of urotropin, A., i, 1218.

Volk, H. See Fr. Boedecker.

Vollbrecht, Erich. See Karl Freudenberg.

Volmer, M., and I. Estermann, vaporisation coefficients of solid and liquid mercury, A., ii, 193.

coefficients of vaporisation and their relationship to Ostwald's step rule,

A., ii, 193.

Volmer, M., and K. Riggert, dependence of velocity of reaction on the concentration in photochemical processes, A., ii, 336.

Volwiler, E. H., and Elmer B. Vliet, preparation and hydrolysis of benzyl

esters, A., ii, 41.
Volwiler, E. H. See also Oliver Kamm.
Voorhees, V., and Roger Adams, the use of the oxides of platinum for the catalytic reduction of organic com-

pounds. I., A., ii, 558.

Vorländer, Daniel, molecular arrangement and liquid crystal formation,

A., ii, 554.

Voroshcov, N. N., synthesis of substantive azo-dyes derived from naphthalene, A., i, 956.

chemistry of naphthalene and its derivatives; chemical peculiarities of the naphthalene nucleus, A., i, 1135.

Vorschütz, Joseph, continuous current and permeability (in muscle). II. Effect of atkaloidal salts and other organic electrolytes, A., i, 791.

Vortmann, Giorgio, sodium sulphide as a substitute for hydrogen sulphide in qualitative analysis, A., ii, 653.

Vorwerk, Walter. See Fritz Paneth. Vosburgh, Warren C., some errors in the study of invertase action, A., i,

potassium dichromate as a standard in iodimetry and the estimation of chromates by the iodide method, A., ii, 863.

Vosburgh, Warren C. See also Marion Eppley.

Voss, G. von. See Paul Friedländer.

Vossen, G. See George Schroeter.

Votoček, Emil, the rapid estimation of chlorine in organic compounds, A., ii,

Vournazos, Alexander Ch., complex mixed antimony iodobromides, A., ii,

Vridhachalam, P. N. See Kishori Lal Moudgill.

Vürtheim, A., the volumetric estimation of magnesium in potassium salts, A., ii, 870.

Vürtheim, A., and G. H. C. van Bers, the volumetric estimation of calcium, A., ii, 869.

Vuillaume, M. See Augustin Boutaric. Vulquin, E. See M. Entat.

w.

Wachtel, Curt, detection and estimation of morphine and other alkaloids in animal excreta and organs, A., ii, 171. Wackermann, Harald. See Otto Diels.

Wadsworth, Raymond V. See Arthur W. Knapp.

Wächter, Friedrich, some remarkable properties of gases, A., ii, 476.

the constitution of the chemical elements, A., ii, 837.

the disintegration of chemical elements, A., ii, 838.

Wälti, A. See Paul Karrer.
Waentig, Percy, preparation and properties of cellulose solutions, A., i, 988. Wagner, Adalbert. See Erich Schmidt.

Wagner, Josef. See Albin Kurtenacker. Wagner, Mario Basto, general methods for the determination of the true molecular constitution of pure substances and their mixtures, A., ii,

116. thermodynamics of mixtures. A., ii, 116.

theory of equations of state. II., A., ii, 117.

Wagner, Otto. See Paul Rabe.

Wagner, Richard, and Jakob K. Parnas, observations on sugar synthesis. II. An abnormal disturbance of carbohydrate exchange and its relation to diabetes mellitus, A., i, 965.

Wagner, Richard. See also Jakob K. Parnas.

Wagner, Walter. See Julius Meyer. Wahl, André, and R. Lantz, the 2hydroxy-1-arylnaphthylamines, A., i,

Wahl, André, G. Normand, and G. Vermeylen, the monochlorotoluenes, A., i, 442.

Wahl, Carl, rupture of bridge linkings. A., i, 653.

Wahl, Ottmar. See Kurt Hess.

See Hans Theodor Wahl, Rudolf. Bucherer.

Wahlberg, H. E., Swedish pines and spruces, A., i, 1101.

Wahlin, H. B., behaviour of free electrons toward gas molecules, A., ii, 608.

Wakeman, Alfred John. See Thomas Burr Osborne.

Waksman, Selman A., micro-organisms concerned in the oxidation of sulphur in the soil. III. Media used for the isolation of sulphur bacteria from the soil, A., i, 706.

Waksman, Selman A., and Jacob S. Joffe, chemistry of the oxidation of sulphur to sulphuric acid by microorganisms, and transformation of insoluble phosphates into soluble forms. A., i, 416.

Waksman, Selman A. See also Jacob Goodale Lipman.

Walbum, L. E., effect of manganous chloride on the formation of diphtheria toxin, A., i, 795.

effect of different metallic salts on the formation of staphylolysin, A., i,

formation of bacterial toxins. Diphtheria toxin, A., i, 902.

Walbum, L. E. See also Helen A. Purdy.

Walden, Paul, the A-V curves of nonaqueous solutions of binary electrolytes, A., ii, 345.

Waldo, John H. See Oliver Kamm.

Waldschmidt-Leitz, Ernst. See Richard Willstätter.

Wales, H., naphthalenesulphonic acids. IV. Solubilities of some amine salts of naphthalenesulphonic acids, A., i, 727.

Walker, Florence. See Henry Clapp Sherman.

Walker, Hilda. See Evelyn Ashley Cooper.

Walker, (Sir) James, the rôle of the physicist in the development of chemical theory, T., 735.

Walker, (Miss) Nellie. See Alexander McKenzie.

Walker, Osman James. See George Shannon Forbes.

Wallington, Reginald Wilfred. See Francis Ernest Francis.

Wallis, Albert Edward. See Robert Ludwig Mond.

Walter, Heinrich, the chemical constitution of protoplasm, A., i, 308.

Walters, F. M., jun., wave-length measurements in arc spectra photowave-length graphed in the yellow, red, and infrared, A., ii, 100.

Walther, P., sodium carbonate minerals from Lake Magadi, Kenya Colony,

A., ii, 859.

Walton, James H., and Llewellyn B. Parsons, preparation and properties of the persulphides of hydrogen, A., ii, 281.

Walton, James H., and Clarence R. Wise, equilibrium in the system,

Wampler, R. W. See H. H. King.
Wang, Chi Che, I. The composition of
Chinese edible birds' nests and the nature of their proteins. II. The isolation and the nature of the aminosugar of Chinese edible birds' nests, A., i, 299.

Warburg, Erik Johan, carbonic acid compounds and hydrogen-ion activities in blood and salt solutions, A., i, 788.

Warburg, Otto, physical chemistry of cell respiration, A., i, 190. surface reactions in living cells, A., i, 787.

Warburg, Otto. See also C. Müller. Warburg, Otto, and Erwin Negelein, energy changes accompanying the assimilation of carbon dioxide, A., i, 1097.

Warcollier and Le Moal, progressive disappearance of free sulphurous acid

in a preserved apple juice, A., i, 415. Ward, Charles Frederick, the bromination of acids in the a-position, T., 1161.

Ward, James Bertram. See Archibald Edwin Goddard.

Warden, C. C., nature of alcoholic fermentation, A., i, 307.

William, \mathbf{and} FredericWardlaw, William Pinkard, the oxidising properties of sulphur dioxide. Copper chlorides, T., 210. III.

Copper chlorides, T., 210. Wardlaw, William. See also Frederic William Pinkard, and Lachlan Mac-

quaric Stewart.

Wark, Ian William, a rapid iodometric estimation of copper and iron in mixtures of their salts, T., 358. Warner, J. C. See Oliver W. Brown.

Warren, Lewis E., estimation of digitoxin in digitan, A., ii, 403.

Warren, Lewis E., and A. H. Clark, the Bliss method for the separation of strychnine from quinine, A., ii, 171.

Wartenberg, H. von, and O. Bosse, the vapour pressure of some salts. III., A., ii, 739.

Wartenberg, H. von, and Friedrich August Henglein, the dissociation of chlorine, A., ii, 441.

Wartenberg, H. von, and H. Schulz, vapour pressure of some salts. II., A., ii, 146.

Wasastjerna, Jarl A., refraction of light and atomic structure; refraction equivalents of ions, A., ii, 1.

optical properties of solutions; a theory of the structure of the molecules of electrolytes, A., ii, 2.

structure of atoms and molecules in the light of the dispersion theory, A., ii, 491.

thermochemistry and electromotive force in electric elements, A., ii, 815.

Washburn, Edward Wight, and Louis Navias, the relation of chalcedony to other forms of silica, A., ii, 304.

Washington, Henry Stephens, Herbert Eugene Merwin, augite from Hawaii, A., ii, 220.

aphthitalite from Kilauea, A., ii, 386. CapsellaWasicky, Richard,

pastoris, Moench, A., i, 907. Wassermann, Paul. See Hugo Weil. Wastl, (Frl.) H. See R. Brinkman.

Watanabe. See Riko Majima. Watanabé, Manjirô, babingtonite from

Japan, A., ii, 651. Waters, C. A. See William Edward

Garner. Waterman, Henry C. See David Breese Jones.

Waterman, Hein Israel, and J. N. J. Perquin, evaluation of the degree of unsaturation of mineral oils in

the Bergius process, A., ii, 90. the estimation of aromatic hydrocarbons in mineral oil fractions, A., ii, 399.

Waterman, Hein Israel, and M. J. van Tussenbrock, the formation of formic acid during the decomposition of dextrose in alkaline solution, A., i, 433.

Watkins, Cyril Mercer. See Francis Ernest Francis.

Watson, Arthur Frederick. See Jack Cecil Drummond.

Watson, Amy R. See J. W. W. Dyer. Watson, Edwin Roy, and Sikhibhushan Dutt, attempts to prepare red sulphide dyes. I., T., 1939.

attempts to prepare red sulphide dyes. II. Mercaptan derivatives of azo-

dyes, T., 2414.

Watson, S. J., Atkinson's process for the estimation of potassium in the presence of sodium, magnesium, sulphates, and phosphates, A., ii, 586.

Wattenberg, H. See E. Zintl.

Wayman, Marguerite. See Henry Clapp

Sherman.

Wayne, Edward Johnson, and Julius Berend Cohen, the aldehydosalicylic acids and their derivatives, T., 1022.

Weber, A. See W. D. Treadwell.

Weber, E. See Vogel.

Weber, I. See Phabus A. Levene.

Weber, J. See Leo Grünhut.

Weber, Sophus, critical constants of mercury, A., ii, 645, 769.
Weber, W. See William Küster.

Webster, David L., critical potentials of the L-series of platinum, A., ii, 805.

Webster, Thomas Arthur. See James

Argyll Campbell.

Wecker, Albert. See Heinrich Wieland. Wedekind, Edgar, and Cl. Weinand, condensation products from acid haloids. X. Action of triethylamine on ketopinyl chloride, A., i, 548.

Wedekind, Edgar, and Cl. Weinand [with M. Miller], condensation products from acid haloids. IX. Ketenium compounds, A., i, 234.

Weerd, F. N. B. de. See Nicolaas

Schoorl.

Wegscheider, Rudolf, transformations during the fission of racemic substances, A., i, 441.

equation of condition, A., ii, 192.

the ammonium carbonate-carbamate equilibrium, A., ii, 376.

influence of ethyl alcohol on the colour change of phenolphthalein, A., ii, 387.

course of simultaneous reactions, A., ii, 489.

Wehmer, Carl, action of coal gas on plants, A., i, 211.

Weibezahn, Karl. See Jakob Meisenheimer.

Weichmann, Richard, an absorption band spectrum for water in the region of wave-lengths of several decimetres, A., ii, 5, 331.

Weick, R. See Henri Gault.

11.

Weickert, O. See Walther Borsche.

Weidenhagen, Rudolf. See Burckhardt Helferich.

Weidert, F., absorption spectra of glasses of various composition containing didymium, A., ii, 413.

Weigel, O., behaviour of sulphides of heavy metals in aqueous solutions, A., ii, 644.

Weigert, Fritz, physical chemistry of colour vision, A., i, 607. photochemistry of the retina, A., ii,

Weigert, Fritz, absorption and dispersion of radiation, A., ii, 605.

fluorescence, photochemical action, and Einstein's law, A., ii, 681.

Weigert, Fritz, and Karl Kellermann, photochemistry of chlorine detonating gas, A., ii, 808.

Weigert, Fritz, and Walter Schöller, photochemistry of silver compounds,

À., ii, 10.

Weigt, Hans, electrical moments of carbon monoxide and dioxide molecules, A., ii, 109.

Weil, Hugo, and Karl Brimmer, reduction of substituted salicylic acids, A., i, 349.

Weil, Hugo, and Walter Heerdt, the reduction of naphtholcarboxylic acids to aldehydes, A., i, 256.
Weil, Hugo, and E. Moser, the action of

sodium hydrogen sulphite on nitrocompounds of the benzene series, A., i, 443.

Weil, Hugo, and Hermann Ostermeier, reduction of naphthalene- and naphthol-carboxylic acids, A., i, 139.

Weil, Hugo, Max Traun, and Sigismond Marcel, the reduction of substituted salicylic acids, A., i, 1023.

Weil, Hugo, and Paul Wassermann, the action of sodium hydrogen sulphite on the nitroanilines, A., i, 1006.

Weil, K. See Adolf Windaus. Weimer, J. L. See L. L. Harter. Wein, Walter. See Wilhelm Biltz. Weinand, Cl. See Edgar Wedekind.

Weinberg, Abraham Albert, nephelometry; a nephelometer with constant standard, A., ii, 309. Weinland, Rudolf Friedrich, and Georg

Fischer, mangani-acetates and -benzoates, A., i, 421.

Weinland, Rudolf Friedrich, and A. Kissling, the constitution of some ferri-chloride (-thiocyanatenitrate) compounds with pyridine or quinoline, A., i, 363.

Weinland, Rudolf Friedrich, and Rudolf Stroh, complex compounds of lead acetate, A., i, 981.

the constitution of basic lead salts, A., ii, 767.

Weiser, Harry B., adsorption by precipitates. V. Adsorption during the precipitation of colloids by mixtures of electrolytes, A., ii, 262. hydrous oxides. III. and IV., A., ii, 575, 853.

Weiser, Harry B., and Henry O. Nicholas, influence of the concentration of colloids on their precipitation by electrolytes, A., ii, 266.

Weiser, Nikolaus. See Josef Holluta. Weismantel, Josef. See Julius von Braun.

Weiss, E., and V. C. Garner, chronic nephritis with an unusual degree of nitrogen retention, A., i, 704.

Weiss, H., and P. Henry, influence of temperature on the velocity of interpenetration of solids, Λ ., ii, 207.

influence of the time factor on the interpenetration of solids by chemical reaction, A., ii, 487.

Weiss, John Maurice, and Charles R. Downs, catalytic fluorene, A., i, 27. oxidation

the formation of malic acid, A., i, 622. Weiss, Pierre, magnetism and the constitution of atoms, A., ii, 23.

Weiss, R., estimation of the calcium

content of blood, A., ii, 227.
Weiss, Soma. and Robert A. Hatcher, strychnine, A., i, 900.

Weiss, St. See Herbert Elias, and Z. Ernst.

Weissenberg, K. See M. Ettisch.

Weissenberger, Georg, and A. Zoder, analysis of chlorosulphonic acid, A., ii, 390.

Weissgerber, Rudolf. See Gesellschaft für Teerverwertung, m. b. H.

Weitz, Ernst, dissociation of the so-called 1:1'-dibenzyltetrahydro-4:4'dipyridyl, A., i, 470.

Weitz, Ernst, and Theodor König, free anmonium radicles. IV. Further investigations on 1:1'-dibenzyl-4:4'-dipyridinium and its homologues and on the so-called 1:1'disubstituted tetrahydro-4:4'-dipyridyls, A., i, 1186.

Weitz, Ernst, and Richard Ludwig, free ammonium radicles. III. Existence of N-benzylpyridinium, A., i, 365.

Weitzenböck. Richard. SeeRolandScholl.

Welker, William H., and J. L. Bollman, effect of subcutaneous injections of solutions of potassium cyanide on the catalase content of the blood, A., i, 192.

Wells, Horace Lemuel, complex chlorides containing gold. I. Pollard's ammonium silver auric chloride, A., ii, 449.

complex chlorides containing gold. II. Casium triple salts, A., ii, 449.

a chromophore grouping of atoms in inorganic triple salts and a general theory for the cause of the colours of substances, A., ii, 464.

some complex chlorides containing gold. III. A new cæsium auric chloride, A., ii, 514.

discussion of triple salts, A., ii, 560.

Wells, P. V., simple theory of the nephelometer, A., ii, 308.

Wells, Roger Clark, estimation of silica in filtered sea water, A., ii, 868.

Welter, Georges, micro-analysis organic substances, A., ii, 399.

Welter, Georges. See also Maurice Nicloux.

Weltmann, Oskar, the iodine number of urine, A., i, 88.

Weltmann, Oskar. See also Hermann K. Barrenscheen.

Weltzien, Wilhelm. See Kurt Hess.

Welzmüller, Ferdinand, the diastatic action of cow's milk towards various starches, A., i, 400.

Wende, E. See S. Goy.

Wendehorst, See Erwin. Gerhart Jander.

Wendt, Gerald L., active hydrogen and nitrogen, A., ii, 639.

Wendt, Gerald L., and Clarence E. Irion, experimental attempts to decompose tungsten at high temperatures, A. ii, 773.

Wendt, Gerald L., and Robert S. Landauer, triatomic hydrogen. II., A., ii, 369.

Wenger, Paul, and P. Christin, decomposition and analysis of monazite, A, ii, 722.

Wentzel, Gregor, spark lines in the Röntgen spectrum, A., ii, 249. Röntgen spectra and chemical valency,

A., ii, 607. Wenzl, Hermann. See Emil Fromm. Werb, Otto. See Bruno Emmert.

Wernecke, Hermann. See Fritz Mayer. Werner, A. See Hans Geiger.

Werner, Emil Alphonse, the constitution of carbamides. XIV. The decomposition of urea by sodium hypobromite in alkaline solution, and an improved procedure for the estimation of urea by this means, T., 2318.

Werner, Emil Alphonse, and James Bell, the preparation of methylguanidine, and of \$\beta\beta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\rightarrow\delta\righ interaction of dicyanodiamide, and methylammonium and dimethylammonium chlorides respectively, T., 1790.

Werner, Felicitas. See Albin Kurtenacker.

Werner, Fritz. See K. Hugo Bauer. Werner, P. See David Holde.

Werner, Sven. See H. Baggesgaard-Rasmussen.

Wertenstein, Mathilde. See Hilary Lachs.

Wertheim, Edgar, a modified Schiff's solution, A., ii, 793.

Wertheim, Edgar. See also John W. E. Glattfield.

Wertheimer, Ernst. See Emil Abderhalden.

Wertheimer, Irma. See F. Himstedt. West, Augustus P., and Zoila Montes,

lumbang oil (candlenut oil), A., i, 95.

West, Randolph. See F. A. Stevens.

West, Ralph Winton, quantitative reduction by hydriodic acid of halogenated malonyl derivatives. II. The s.-tetra-substituted amides of bromoand chloro-malonic acid, T., 2196.

Wester, D. H., the manganese content of (Dutch) seeds, A., i, 93.

the chemical constituents of some Loranthaceæ, A., i, 208.

the manganese content of flowers, A., i, 309.

 Culture experiments with soja beans. II. Occurrence of urease in parts of the plant other than the seeds, A., i, 311.

influence of different chemicals, of kations and anions, and of mixtures of electrolytes, on the ureolitic power of urease, A., i, 391.

Westerlind, S. See K. Albert Vesterberg. Westermann, H. See Karl von Auwers. Westgren, Arne, and Axel E. Lindh, crystalline structure of iron and steel,

crystalline structure of iron and steel, A., ii, 152. Westgren, Arne, and Gösta Phragmén,

Westgren, Arne, and Gösta Phragmen, crystal structure of iron and steel.

II., A., ii, 711. Westgren, Arne, and Josef Reitstötter, coagulation of colloids, A., ii, 625.

Westen, Arnold, the quaternary system potassium sulphate-magnesium sulphate-ammonium sulphate-water, T., 1223.

Wetterfors, Paul, experimental proof of some theories of natural rotatory power of optically active solutions, A., ii, 247.

Wetzel, Johannes, water pump, A., ii, 139.
Whattam, Thomas William. See Arthur
George Perkin.

Wheeler, Alvin Sawyer, and T. M. Andrews, hydroxynaphthaquinone. IV. New derivatives of 2:3:8-tribromo-5-hydroxy-1:4-naphthaquinone, A., i, 354.

Wheeler, Alvin Sawyer, and B. Naiman, hydroxynaphthaquinones. V. Derivatives of 2-bromo-5-hydroxy-1:4-naphthaquinone (monobromojuglone), A., i, 1165.

Wheeler, Alvin Sawyer, and Ira W. Smithey, p-cymene. III. The bromination of 2-amino-p-cymene, A., i, 332.

Wheeler, Richard Vernon. See Walter Mason, William Payman, and Fredcrick Vincent Tideswell.

Wheeler, Thomas Sherlock, and Ethelbert William Blair, the action of ozone on hydrocarbons with special reference to the production of formaldehyde. I. The action of ozone on methane, A., i, 1105.

a receiver for fractionation in a current of gas or under reduced pres-

sure, A., ii, 258.

Wheeler, Thomas Sherlock. See also Ethelbert William Blair.

Whelan, Julia, oil of Bystropogon canus, A., i, 847.

Wherry, Edgar Theodore, optical-crystallographic properties of calcium oxalate monohydrate, A., ii, 450.

Wherry, Edgar Theodore, and Raymond M. Hann, crystallographic-optical properties of calcium fumarate and maleate, A., i, 716.
Wherry, Edgar Theodore, and Earl V.

Wherry, Edgar Theodore, and Earl V. Shannon, crocidolite from Eastern Pennsylvania, A., ii, 518.

Wherry, Edgar Theodore. See also Earl V. Shannon.

Whetham, Margaret Dampier. See Marjory Stephenson.

Whipple, G. H. See G. D. Delprat, and K. F. Pelkan.

White, Albert Greville, limits for the propagation of flame in vapour-air mixtures. I. Mixtures of air and one vapour at the ordinary temp erature and pressure, T., 1244.

limits for the propagation of flame at various temperatures in mixtures of ammonia with air and oxygen, T., 1688.

limits for the propagation of flame in vapour-air mixtures. II. Mixtures of more than one vapour and air at the ordinary temperature and pressure, T., 2561.

White, Charles Powell, copper in tumours and normal tissues, A., i, 399. application of the methods of correlation to the study of the urine,

relation to the study of A., i, 1214.

White, Ernest C. See Alfred T. Larson. Whiteley, (Miss) Martha Annic. See Arthur Geoffrey Rendall.

Whitfeild, Bernard Wyndham. See Alfred Francis Joseph.

Whitmore, Frank C., and Edmund Burrus Middleton, organic mercury compounds prepared from o-chloromercurip-nitrobenzoyl chloride, A., i, 888.

Whitney. Milton, origin of soil colloids, A., i, 708.

Whittaker, E. T., the quantum mechanism in the atom, A., ii, 632.

Wibaut, Johan Pieter, the energy of the atomic linkings in saturated and unsaturated hydrocarbons, A., i, 909.

behaviour of amorphous carbon and sulphur at high temperatures; carbon sulphides, A., ii, 52, 373. comparison of the linking of carbon

atoms in graphite and in aromatic hydrocarbons, A., ii, 259.

the preparation of carbon from carbon monoxide by means of a catalyst,

A., ii, 565.

Wibaut, Johan Pieter, and J. Jürgens, action of mercuric acetate on nitrobenzene, A., i, 694.

Widmark, Erik Matteo Prochet, succinodehydrogenase, A., i, 600.

a micro-method for the estimation of ethyl alcohol in blood, A., ii, 789.

Widmark, Erik Matteo Prochet, and Carl Alex. Jeppsson, a defined organic catalyst with a hydrogen-ion optimum, A., ii, 437.

Widmark, Erik Matteo Prochet, and Gunnar Lindahl, chemical conditions for the maintenance of normal cell structure. IV. Difference in nitrogen and water content of muscle treated with sodium and calcium chloride, A., i, 607.

Widmer, C. See Robert Eder.
Wiechmann, Ernst, permeability of the red corpuseles of human blood for anions, A., i, 80.

permeability of the red blood-corpuscles, A., i, 289.

Wiechowski, W. See Oskar Adler.

Wiedbrauk, Erich, apparatus for the

rapid determination of the specific gravity of small amounts of liquid, A., ii, 740.

Wiegner, Georg, and J. Magasanik, estimation of volatile fatty acids,

A., ii, 532.

Wiegner, Georg, J. Magasanik, and H. Gessner, hysteresis phenomena and coagulation of sols with ultramicrons of rod-like structure, in particular vanadium pentoxide compared with fibrin sols, A., ii, 356.

Wieland, Heinrich, toad venom, A., i, 199. Wieland, Heinrich, and Franz Adickes, XIII. The formula of bile acids. isodeoxybilianic acid; a contribution to orientation, A., i, 838.

Wieland, Heinrich, and Richard Alles, the poisonous substance of toads, A., i,

Wieland, Heinrich, and Ludwig Bettag, the Friedel-Crafts' reaction, A., i, 1033.

Wieland, Heinrich, and Fritz Kögl, organic radicles with quadrivalent nitrogen. III., A., i, 726.

Wieland, Heinrich, Egon Popper, and Hermann Seefried, the occurrence of free radicles in chemical reactions; the radicles of the basic triphenylmethane dyes, A., i, 772.

Wieland, Heinrich, Fritz Reindel, and Juan Ferrer, diphenylene-ethylene, A., i, 1137.

Wieland, Heinrich, and Georg Scheuing, rosaniline-sulphurous acid and its colour reactions with aldehydes, A., i, 58.

Wieland, Heinrich, and Otto Schlichting, bile acids. XI. The oxidation of cholic acid, A., i, 554. bile acids. XII. Ciloidanic acid, A., i,

838.

Wieland, Heinrich, and Wilhelm Schulenburg, bile salts. X. The further degradation of deoxycholic acid, A., i, 346.
Wieland, Heinrich, and Albert Wecker

[with T.J. Albert, and (Frl.) E. Haas], hydrazines. XXV. A new class of ditertiary aromatic hydrazines, A.,i,779.

Wieland, Hermann, the mode of action of narcotic gases; nitrous oxide and

acetylene, A., i, 497.

Wiesler, Herta. See Eduard Kopetschni. Wiessmann, H. See Otto Lemmermann. Wieters, Hermann. See Edmund Speyer.

Wigley, Gladys Mary. See Hubert Frank Coward.

Wignall, Harry. See British Dyestuffs Corporation, Ltd.

Wilber, D. T. See Edward L. Nichols. Wilbrand, Eberhard, excretion of sweat and the composition of the blood, A., i, 79.

Wilder, Russell M., and Malcolm D. Winter, the threshold of ketogenesis, A., i, 893.

Wiley, J. A. See George Leslie Kelley.

Wilke, C. See David Holde. Wilke, E., aqueous carb carboni**c**

solutions, A., ii, 52. Wilke, K., authraquinone derivatives, A., i, 943.

Wilkendorf, Rudolf. See Erich Schmidt. Wilkes, Sidney Herbert. See Malcolm

Percival Applebey. Wilkins, T. R., multiple valency in the

ionisation by a-rays, A., ii, 607. Wilkinson, JohnFrederick. See Frederick Challenger.

Will, Erich. See Karl Andreas Hofmann.

Willaman, J. J., preparation of inulin, with special reference to artichoke tubers as a source, A., i, 434.

Willard, Hobart Hurd, and W. Ellwood Cake, volumetric estimation of sulphide by oxidation to sulphate, A., ii, 80.

Willard, Hobart Hurd, and Dorothy Hall, separation of copper by means of thiophenylhydantoic acid, A., ii, 872.

separation and estimation of cobalt. I. Separation of cobalt by means of thiophenylhydantoic acid. Separation of cobalt from other metals, A., ii, 874.

separation and estimation of cobalt. 11. Gravimetric estimation of cobalt,

A., ii, 874.

separation and estimation of cobalt. III. Volumet**r**ic estimation

cobalt, A., ii, 875.

Willard, Hobart Hurd, and G. Frederick Smith, preparation and properties of magnesium perchlorate and its use as a drying agent, A., ii, 850.

Williams, Arthur G., est phenanthrene, A., ii, 90. estimation of

Williams, E. H., and Jakob Kunz, photoelectric effect of alkali [metal] vapours and a new determination of h, A., ii, 809.

Williams, E. J., a simple receiver for fractional distillation under diminished

pressure, A., ii, 26.

Williams, G. A., and John Bright Ferguson, diffusion of hydrogen and helium through silica glass and other glasses, A., ii, 841. Williams, H. See W. Singleton.

Williams, J. Lisle, the total non-protein nitrogen constituents of the blood in chronic nephritis with hypertension, A., i, 401.

Williams, Percy Noel.See Arthur

Henry Salway.

Williams, Roger J. See Chester E. Adams. Williams, R. R., vitamins from the point of view of structural chemistry, A., i, 280.

Williams, VernonHarcourt. Sec Alexander Findlay.

Williams, William Dudley. See Leonard Eric Hinkel.

Williamson, R. C., ionisation of potassium vapour by light, A., ii, 681.

Willig. See William Kuster.

Willmann, Karl, the natural iron hydroxides, A., ii, 76.

Willmersdorf, Amalie. Sec JakobMeisenheimer.

Willstätter, Richard, and WilhelmCsányi, emulsin, A., i, 390.

Willstätter, Richard, Johanna Graser, and Richard Kuhn, invertase. A., i, 1200.

Willstätter, Richard, and Ludwig Kalb [with G. von Miller], the reduction of lignin and of carbohydrates with hydrogen iodide and phosphorus, A., i, 989.

Willstätter, Richard, and Richard Kuhn, remarks on the elution of saccharase and maltase from adsorbed substances, A., i, 283.

the specific nature of saccharase and

raffinase, A., i, 284.

stätter, Richard, and Gertrud Oppenheimer, the lactase content GertrudWillstätter, and the fermenting power of lactosefermenting yeasts, A., i, 203. emulsin. II., A., i, 959.

Willstätter, Richard, and Fritz Racke,

invertase. II., A., i, 598. Willstätter, Richard, and Werner Steibelt, maltase. III. The non-identity of maltase and a-glucosidase, A., i, 232.

maltase. IV. The fermenting activity of yeasts poor in maltase, A., i, 306.

Willstätter, Richard, and Ernst Waldschmidt-Leitz, alkalimetric estimation of amino-acids and peptides, A., ii, 169.

Willstätter, Richard, Otto Wolfes, and Horst Maeder, tropinonecarboxylic acid esters, A., i, 938.

Wilson, Daniel. See Christopher Kelk Ingold.

Wilson, F. H. H. See Eustace Ebenezer Turner.

Wilson, Forsyth James, and Robert Burns, reactions of thiosemicarbazones. I. Action of halogen compounds, T.,

Wilson, Forsyth James, Isaac Vance Hopper, and Archibald Barclay Crawford, the action of amines on semicarbazones. I. Preparation of an optically active semicarbazide, T., 866.

Wilson, H. A. See Arthur Amos Noves.

Walter. See Philip H. Wilson, J. Mitchell.

Wilson, Robert E., and Everett W. Fuller, reaction of carbonyl chloride with benzene and m-xylene in the presence of aluminium chloride, A., i, 827.

Wilson, Samuel, and C. R. McCrosky, polymorphic transformations of antimony trisulphide, A., ii, 154.

Wilson, S. J., estimation of sodium in serum without the use of platinum dishes, A., ii, 395.

Wilson, Thomas A. See William Albert Noyes.

Wilson, T. E. See William Ernest Stephen Turner.

Wilson, William H., scorpion venom, A., i, 969.

Wiltshire, Marion O. P., basal meta-bolism in menstruation, A., i, 395. Winch, Howard James, and V. L.

Chandratreya, the volumetric estimation of titanium dioxide in bauxite, A., ii, 459.

Windaus, Adolf [with Harry Grimmel, H. Lüders, and A. von Staden], cholesterol, A., i, 541.

Windaus, Adolf, W. Dörries, and H. Jensen, the behaviour of certain bisacylaminoethylene derivatives prepared from glyoxalines, A., i, 60.

Windaus, Adolf, and Walter Hückel, the formation of cyclic compounds from hydroaromatic dicarboxylic acids,

A., i, 658.

Windaus, Adolf, and Hermann Lüders, the action of benzoyl peroxide on cholesterol, A., i, 453.

Windaus, Adolf, and K. Weil, digitonin and its derivatives, A., i, 848.

Windheuser, K. See A. Morgen.

Windisch, H. See Friedrich L. Hahn.

Windisch, Wilhelm, and Philipp Osswald, ionisation and surface activity of aqueous solutions of aliphatic acids, A., ii, 123.

Wingardh, K. A., absorption of Röntgen

rays, A., ii, 249.

Wingler, Aug. See Heinrich Kiliani. Winkel, Herbert. See Arthur Percival Tanberg.

Winkler, Karl. See Max Trautz.

Winkler, Ludwig Wilhelm, estimation of the iodine-bromine number without using potassium iodide. A., ii, 534. gravimetric analysis. XXV. Estima-

tion of manganese, A., ii, 589. alkali iodides, A., ii, 764.

Winter, Malcolm D. See Russell M. Wilder.

Winter, O. B. See Charles S. Robinson. Winterstein, Ernst, and D. Iatrides, taxine, the alkaloid from the yew, Taxus baccata. I., A., i, 572.

Winterstein, Ernst, and J. Teleczky. constituents of saffron. I. Picrocrocin,

A., i, 563.

Wintgen, Robert, and Heinz Vogel, equilibrium, gelatin-hydrochloric acid. II., A., i, 280.

Winther, Chr., theory of induced reactions, A., ii, 336.

photochemical oxidation of hydriodic acid, A., ii, 808.

photochemical efficiency of absorbed radiation, A., ii, 808.

Winther, Chr., H. Baggesgaard-Rasmussen, and Erling Schreiner, a simple method for the measurement of ultraviolet absorption, A., ii, 729.

Wirth, Th. See Adolf Grün.

Wise, Clarence R. See James H. Walton. Wishart, Mary B. See F. M. Allen.

Wismer, K. L., pressure volume relation of superheated liquids, A., ii, 425.

Wiśniewski, F. J. See K. Jablczyński.

Wiswald, J. See Emil Briner.

Withers, John Charles. See Robert George Fargher.

Withrow, James R. See Edgar C. Bain, and S. Lantz Shenefield.

Witt, J. C., oxidation of oxalic acid in the absence of other acids, A., ii, 594.

Wittelsbach, Walter. See Kurt Hess. Wittka, Franz. See Adolf Grun.

Wittmann, Adolf. See Walter Dieckmann.

Wittwer, Max. See Hans Lecher.

Wittwer, R. See Hans Rupe. Witzemann, Edgar, catalytic effect of ammonia on the oxidation of butyric acid with hydrogen peroxide, A., i, 6.

transition from crystalloid to colloid properties within homologous series,

A., ii, 428.

Wöber, A., iodometric estimation of copper in the presence of iron, A., ii, 588.

Wöhler, Lothar, and F. Müller, calcium silicides, A., ii, 293.

Wohl, Alfred, preparation of acetalde-

hyde and acetic acid, A., i, 430. equation of condition. II. Principal equation of condition. III. Principal equation of condition and the equation of condition for individual IV. Compressibility substances. equations of liquids, A., ii, 117.

Wohl, Alfred, and H. Krull, saccharifi-

cation of cellulose, A., i, 232.

Wohl, Alfred, and R. Schellenberg, conversion of active glyceraldehyde into active glyceric acid, A., i, 626.

Wojnicz-Sianozencki, Z., kinetics of open saturated chains of carbon atoms in relationship to the Baeyer strain theory, A., i, 330.

Wolf, A. See Alexander Gutbier.

Wolf, Charles George Lewis, the mechanism of the reversal in reaction of a medium which takes place during growth of Bacillus diphtheria, A., i, 1218.

Wolf, Charles George Lewis, and Eric Keightley Rideal, the properties of dibenzoyleystine, A., i, 1114.

Wolf, Emil. See Georg von Kereszty.

Wolf, Elizabeth P., inflammation. I. Influence of chemicals on the chemotaxis of leucocytes in vitro, A., i, 401.

Wolfes, Otto, and Horst Maeder, tropinonecarboxylic acid esters, A., i, 938. Wolfes, Otto. See also Emanuel Merck,

and Richard Willstätter.

Wolff, H., estimation of alcohols by

acetylation, A., ii, 165.

Wolff, (Mlle) N., furfurylidene-1-methylcyclohexan-2-one and some of its derivatives and the mono- and difurfurylidenecyclohexanones, A., 668.

Wolffenstein, Richard, preparation of hydrogenated 1-alkylpyridine-3-carboxylates, A., i, 365, 949. preparation of N-alkyl haloids of

pyridine-3-carboxylate methyl [methyl nicotinate], A., i, 365.

preparation of quaternary ammonium salts of pyridine-3-carboxylic acid

alkyl esters, A., i, 861. preparation of alkyl salts of hydrogenated 1-alkylpyridine-3-carboxylates, A., i, 950.

Wolffram, H., rapid extraction funnel, A., ii, 221.

Woltjer, H. R., the Zeeman effect, A., ii, 102.

Wood, C. J., and P. P. Murdick, stability of phthalate solutions as standards in hydrogen-ion work, A., ii, 735.

Wood, Florence Mary. See Samuel Judd Lewis.

Wood, John Kerfoot. See George Ernest Collins.

Wood, Robert Williams, fluorescence and photochemistry, A., ii, 334.

atomic hydrogen and the Balmer series spectrum, A., ii, 673.

spontaneous incandescence of substances in atomic hydrogen gas, A., ii, 759.

Wood, Robert Williams. See also J. Steph. van der Lingen.

Woog, Paul, relation between the molecular properties and the capacity for fixation of iodine of certain hydrocarbons, A., i, 101.

the velocity of extension of thin layers of oils on the surface of a sheet of water, A., ii, 197.

Wooten, Benjamin A. See Arthur St. C. Dunstan.

Woringer, Pierre, degradation of fatty acids in the animal organism, A., i,

permeability of the intestine

sucrose, A., i, 1214.
Wormser, M. Sec Richard Lorenz.

CXXII. ii.

Worrall, David E., the action of hydroxylamine and of hydrazine on the aryl monothioamides of ethyl acetylmalonate, A., i, 874.

Wosnessenski, See Serg. NikolaiSchilov.

Wouseng, Sung. See René Locquin. Wrangell, M. von, phosphorus nutrition of plants, A., i, 1098.

Wrede, Fritz, the synthesis of disaccharides containing sulphur and selenium by combining two dextrose residues in the C5-position; some new derivatives of ζ-bromoglucose, A., i, 226. thioglucose, A., i, 525.

microchemical estimation of carbon and hydrogen, A., ii, 316.

Wright, Clarence D. See William O. Emery.

Wright, Floyd R. See Roger S. Hubbard.

Wright, Robert, determination of the molecular weight of substances in alcoholic solution from the elevation

of the flash-point, T., 2247. selective solvent action by the constituents of aqueous alcohol, T., 2251.

Wright, W. C. See George Leslie Kelley.

Wrzesnevski, A. N., examination of the pentose in a new case of pentosuria, A., i, 1215.

Wu, Hsien, separate analyses of the corpuscles and the plasma, A., i, 483.

a new colorimetric method for the estimation of plasma proteins, A., ii, 406.

Wu. Hsien. See also Otto Folin.

Wülfing, Johann A., preparation of water-soluble compounds of diethylbarbituric acid and its homologues,

A., i, 1066. Wulf, E. See See Karl von Auwers.

Wulff, Peter. See Erich Tiede. Wunnerlich, H. See Robert Schwarz. Wurmser, (Mile), the preparation of ammonium nitrate, A., ii, 499.

Wurmser, Ren'e, and Raymond Jacquot, the relation between the colloidal state and the physiological functions of protoplasm, A., i, 1221.

Wurmser, René. See also Émile F. Terroine.

Wurzschmitt, Bernard. See Stefan Goldschmidt.

Wuyts, Henri, and A. Vangindertaelen, the quadrivalence of tin in its

mercaptides, A., i, 250. Wyckoff, Ralph W. G., crystal structures of the alkali haloids. I., A., ii, 214.

Wyckoff, Ralph W. G., crystallographic and atomic symmetries of ammonium chloride, A., ii, 290.

crystal structure of silver oxide, A., ii,

291.

crystal structures of the hexaammoniates of the nickel haloids, A., ii, 573.

composition and crystal structure of nickel nitrate hexammoniate, A., ii,

a preliminary attempt to transmute lithium, A., ii, 642.

symmetry and crystal structure of sodium hydrogen acetate, A., ii, 710.

symmetry and crystal structure of zinc bromate hexahydrate, A., ii,

crystal structure of silver molybdate, • A., ii, 765.

Wyckoff, Ralph W. G., and Eugen crystal Posnjak, structure of ammonium platinichloride, A., ii, 214.

crystal structures of the cuprous

haloids, A., ii, 295.

Wyckoff, Ralph W. G. See also Eugen Posnjak.

Y.

Yabuta, Teijiro, a new organic acid (kojic acid) formed by Aspergillus oryzae, A., i, 939.

Yamada, Nobuo, heat of transformation of austenite into martensite and of martensite into pearlite, A., ii, 475.

Yamaguchi, Yohei, determination of high temperatures by effusion of gases, A., ii, 470.

Yamazaki, Eiichi, the successive stages in the hydrolysis of triacetin, A., i, 422.

Yanagisawa, Hidekichi, estimation of

cyanogen, A., ii, 667. Yanagisawa, Hidekichi, and Norikazu Takashima, Japanese bird-lime. II., A., i, 652.

Yant, W. P. See R. R. Sayers.

Yeh, Yu Liang. See Duncan A. Mac-Innes.

Yngve, Victor. See Arthur Becket Lamb.

Yntema, L. F., and B. Smith Hopkins, observations on the rare earths. XI. The arc spectrum of yttrium, A., ii,

Yoder, Lester. See Arthur Wayland Dox. Yoshida, Usaburo, and Shinsuke Tanaka, the tungsten X-ray spectrum with a mica spectrometer, A., ii, 805.

Young, Elrid Gordon, the optical rotatory power of crystalline ovalbumin and serum-albumin, A., i,

the coagulation of protein by sunlight,

A., i, 386.

Youngken, Heber W., and Charles H. La Wall, sand spur, Cenchrus tribuloides, L., A., i, 1100.

Yovanovitch, D., the chemical properties of mesothorium. II., A., ii, 712.

Z.

Zaar, H. See Paul Jacobsen.

Zaborowski, G., estimation of toluene, xylene, and benzene, A., ii, 877.

Zalkind, J. S., union of hydrogen with acetylene derivatives. XIV. Hydrogenation of phenylacetylene, A., i, 1134.

union of hydrogen with acetylene derivatives. XV. Velocities of catalytic reactions, A., ii, 835.

Zambonini, Ferruccio, ardennite from Ceres, in the Ala valley (Piedmont), A., ii, 577.

Zanetti, Joaquin Enrique, J. R. Suydam, jun., and M. Offner, the formation of butadiene from ethylene, A., i, 977.

Zawidzki, Jan, equation for the velocity of reaction of hydrogen peroxide and potassium permanganate, A., ii, 207.

Zawodsky, Othmar. See Robert Kremann.

Zeckendorf, Kurt. See Johannes Kerb. Zehnder, Ludwig, conclusions from the spherical form of the simplest atom, A., ii, 208.

Zeitfuchs, Edward H. August Kraus. See Charles

Zelenka, J. See Julius Stoklasa. Zelinsky, Nicolai E., and E. F. Dengin, synthesis of aminohydroxy-acids and the amino-acid from cyclopropyl methyl ketone [acetyltrimethylene], A., i,

1126.Zellner, Julius, comparative plant chemistry. I. Lythrum salicaria, L., A., i, 799.

plant chemistry. IV. Juncus effusus, L., A., i, 1098.

Julius. Zellner, See also Rudoli Hasenöhrl, and Giscla Nowak.

Zemplén, Géza, and Alex. Hoffmann, salicin thiocyanate and disalicin sulphide, A., i, 563.

Zemplén, Géza, and Alphons Kunz, new derivatives of salicin containing nitrogen and polynuclear hydroxybenzylamines, A., i, 564.

Zerevtinov, Nik. See Nikolai Schilov. Zerner, Ernest, and Robert Hamburger, the action of silver compounds on yeast, A., i, 307.

Zerweck, Werner. See Hans Fischer. Zetzsche, Fritz. See Karl W. Rosen-

Zeynek, R., the preparation of chloroand bromo-tyrosine and the analogous tyramines, A., i, 254.

Ziegler, Karl, and Kurt Ochs, halochromic phenomena with diarylstyrylcarbinols, A., i, 151.

poly-arylated vinyl carbinols and their II. Diarylstyrylcarbderivatives. inols and the products of their transformations, A., i, 1047.

Ziegler, Karl. See also Karl von Auwers.

Heinrich. See Ziegner, HelmutScheibler.

Zielaskowski, Margarete. See Bruno Leichtentritt.

Zijp, C. van, benzidine hydrochloride as a reagent for wood cells, A., ii, 94.

Zilva, Sylvester Solomon, conditions of inactivation of the accessory food factors, A., i, 488.

Zilva, Sylvester Solomon, and Masataro Miura, quantitative estimation of the fat-soluble factor, A., i, 194.

Zimmerlund, G. See Hans von Euler, and Olof Svanberg.

Zimmermann, Kurt. See Erwin Ott.

Zimmermann, L. See A. Reis.

Walther. Zimmermann, See HansTheodor Bucherer.

Zimmern, A., and Edouard Salles, spectrographic study of the de-intensifying of barium platinocyanide in the Villard effect, A., ii, 104.

Zincke, Theodor, and H. Greune, sulphamidophthalic acid and sulphimidophthalic acid, A., i, 550.

Zinke, Alois, preparation of dihydroxyperylene, A., i, 132.

preparation of perylene, A., i, 132.

Zinke, Alois, and Rupert Dengg, synthesis of 1:12-dihydroxyperylene and perylene, A., i, 1013.

Zinke, Alois, Alfred Friedrich, Otto Johannsen, and Rudolf Richter, resin constituents. VIII. The amyrins from elemi resin. II. α-Amyrin, A., i, 667.

Zinke, Alois, Franz Hanselmayer, and Wilhelmine Ehmer, resin constituents. IX. The decomposition of d-siaresinolic acid and lubanyl benzoate, A., i, 668.

Zintl, E., and H. Wattenberg, potentiometric titration of copper, A., ii, 871.

Zisch, W. See Fritz Haber.

Zivy, L. See Louis Jacques Simon. Zizine, P. See A. Grigaut. Zobel, H. See H. P. Kaufmann.

Zocher, H., sols with non-spherical particles, A., ii, 102.

Zocher, H. See also Hans Kautsky. Zoder, A. See Georg Weissenberger.

Zoff, Alfred. See Robert Kremann.

Zollinger-Jenny, Ernst, improvements in the process of converting organic acids into esters, A., i, 914.

Zolotarev, P. V. See P. P. Budnikov.

Zondek, S. G., potassium and radioactivity, A., i, 296.

the ionic equilibrium of cells; the

physiology of sodium, A., i, 296. the rôle of inorganic salts in the functions of the cell, A., i, 399.

Zorn, Bernhard. See Emil Abderhalden.

Zorn, H. Sec Walter König.

Zschokke, H., and L. Häuselmann, estimation of free acid in acid aluminium sulphate solutions, A., ii, 397.

Zsigmondy, Richard, some fundamental conceptions of colloidal chemistry, A., ii, 129.

fundamental principles of colloidal I. Electrical charge of chemistry. the particles and new conceptions of micellæ, A., ii, 484.

Zubkowa, Sophie. See Alexis Bach. Zuckmayer, Fritz, preparation of hydrogenated 2-phenylquinoline-4-carboxylic acid, its homologues, and

their salts, A., i, 574.

preparation of substituted derivatives of hydrogenated 2-phenylquinoline-4-carboxylic acid, and their salts, A., i, 952.

Zunz, Edgard, chemical composition of the thyroid gland, A., i, 397.

Zunz, Edgard, and J. La Barre, the action of the phosphatides on the coagulation of blood, A., i, 697.

Zwaardemaker, Hendrik, odour and chemical structure, A., i, 607. potassium-calcium equilibrium

animal systems, A., i, 1213.

Zweigle, A. See Alexander Gutbier. Zwikker, J. J. Lijnst, starch, A., i, 10. the constitution of polysaccharides A., i, 230, 434.

space structural formulæ of chemical substances in general, and of some alkaloids in particular, A., i, 567.